MARINE RECORD

ESTABLISHED 1878.

VOL. XXII, No. 24. CLEVELAND---JUNE 15, 1899---CHICAGO. $2.00 Per Year. 5c. Single Copy.

LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all genera questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

PRESIDENT.
FRANK J. FIRTH, Philadelphia.

1ST VICE-PRESIDENT.
CAPT. THOS. WILSON, Cleveland.

SECRETARY.
CHARLES H. KEEP, Buffalo.

TREASURER.
GEORGE P. MCKAY, Cleveland.

COUNSEL.
HARVEY D. GOULDER, Cleveland.

EXECUTIVE AND FINANCE COMMITTEE.
JAMES CORRIGAN, Chairman, Cleveland.

COMMITTEE ON LEGISLATION.
GIBSON L. DOUGLAS, Chairman, Buffalo.

COMMITTEE ON AIDS TO NAVIGATION.
GEORGE P. MCKAY, Chairman, Cleveland.

THAT BRITISH COAL SCARE.

The coal-exhaustion scare had again seized upon the British mind. There is probably no foundation for it, no reasonable ground for believing that the coal supply of that country will be exhausted within the fifty years now set as the limit of its lasting, or indeed within many hundreds of years to come. There have been periodical scares set afloat on the same lines during the past several decades and it is almost impossible to calculate what is underground. In any case there is now every prospect that through liquefied air, or the utilization of the inexhaustible power of the tides, or the harnessing of terrestrial magnetism to electrical power uses, or in some other of the many ways open to inventive genius, the need of coal for the production of power will be done away with in large part long before England's coal fields shall cease to yield their product.

But what a calamity it would be to the whole world should the pessimistic prediction prove true! How immeasurable would be the hurt to humankind should Britain's workshops be closed! The damage would not be measured by a withdrawal of the enormous value of needed products from the world's use. That indeed would be a trifle in comparison with the evil effect of the decay of England's influence upon civilization and progress. For should her workshops close for lack of fuel her people in great numbers would be forced to emigrate and her population would fall to the level of her old pre-industrial, agricultural age. Without manufactured products with which to trade, England could support no more people than her fields can feed. And with lost industries and a reduced population the great nation's intellectual, commercial and maritime supremacy and all her potency as a civilizing force in the world would quickly pass away.

A FIVE-MASTED SCHOONER.

A big five-masted schooner, the M. D. Cressy, has just arrived in Baltimore on her maiden voyage. She cleared from Bath, Me., with 2,470 tons of ice. The Cressy is 264 feet long, 43 feet, 9 inches beam, and 21½ feet depth of hold. She registers 1,884 tons net, and 2,114 tons gross. She has a double tier keel, 249 feet long. She is a double-decker and has four hatchways. She is equipped with steam to hoist sail, handle cargo and weigh anchor. She carries 7,000 square yards of canvas.

The cabin is 32x28, 7½ feet high, with all the conveniences, finished in polished oak and sycamore, with walnut pilasters and decorated with gold trimmings. There are six staterooms with toilet rooms and bath rooms, hot and cold water and all heated by steam. The furniture and furnishings are quite elegant.

The spars are fitted with wire rigging set up with turnbuckles. She cost $85,000 and is owned by Percy & Small, the managing owners, Captain W. F. Harding and parties in Maine, Massachusetts and New York. She is named in honor of M. D. Cressy, Esq., of Boston.

Anything in a Maine shipbuilder's yard which isn't desined to step five great sticks is decidedly de trop. Thirty years ago an ordinary three-master was big, and one that would carry 1,200 tons of coal was immense. Then some venturesome owners built a four-master, and now the four-masters are getting too small. A few years ago Captain Davis, of Somerset, got his friends together and built a five-master, the Governor Ames. But now there are no less than four five-masters building in the Maine shipyards, any one of which is bigger than the Governor Ames.

A TREASURY DECISION.

NET TONNAGE.

Manner in which the Net Tonnage of Vessels should be Computed.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION,
Washington, D. C., May 31, 1899.

Sir: This office is in receipt of your report, dated the 27th inst, relative to a variance in the practice at your port and the practice at some other ports regarding the computation of net tonnage in cases similar to that of the steamer Robert and Edwin, in which the gross tonnage was found to be 30.29 and the deducted 19.33 tons.

In the case you present, 19.33 should be deducted from 30.29, so as to obtain a net tonnage of 10 tons. Other analogous cases should be disposed of in a similar manner.

Respectfully yours,
E. T. CHAMBERLAIN, Commissioner.

COLLECTOR OF CUSTOMS, Wiscasset, Me.

FIRING BOILERS—STOKE HOLE WORK.

Those who sit on the open, breezy decks of the excursion steamer these days and complain of heat have little or no idea of what the grimy fellows below in the stoke hole are enduring at that very moment. Cut off from almost every breath of fresh air, toiling in front of the yawning mouths of blazing furnaces, the stoker works in silence and suffering. Stripped to the waist, his face and body grimy and streaming with perspiration, his scant clothing dripping wet, he works in a temperature from 100 to 120 degrees unseen and unthought of. Staggering about in the heat, which is so intense that even the iron bars used to rake up the fire have to be handled with heavy gloves, he endures far more than most people have any idea of, and yet no complaints about the heat are heard from him.

WISHES TO COMMUNICATE.

Mr. P. Quinn, Houghton, Mich., wishes to communicate with his son P. C., who he believes is sailing in a lake steamer in the capacity of engineer. Mr. Quinn, Sr., in a letter to the RECORD, says that he would feel deeply indebted to any one advising him of the whereabouts of his son.

Admiralty Practice—Claimant's Bond.—Where, on motion of a libelant in rem, the court makes an order in setting aside a sale of the libeled vessel under a decree entered at the same term in another suit, unless a bond is given by the claimant and he furnishes an ordinary claimant's bond, such bond is available to the libelant in case of his recovery. The New York, 93 Fed. Rep. (U. S.) 495.

STATISTICAL REPORT OF LAKE COMMERCE THROUGH CANALS AT SAULT STE. MARIE, MICHIGAN AND ONTARIO, FOR THE MONTH OF MAY, 1899.

The United States canal was not used in April. The official report shows that 42 craft were locked through the Canadian Sault Ste. Marie canal, having a total registered tonnage of 10,230.

EAST BOUND.

ITEMS.	U. S. Canal.	Canadian Canal.	Total.
Copper, net tons	10,433	400	10,833
Grain, bushels	8,034,302	301,590	8,335,892
Building stone, net tons	923	.....	923
Flour, barrels	683,520	89,718	773,238
Iron ore, net tons	1,464,875	154,519	1 619,394
Iron, pig, net tons	2,347	.....	2,347
Lumber, M. ft. B. M	96,522	744	97,266
Silver ore, net tons	.....	.....	.....
Wheat, bushels	6.353,673	2,089,715	8,443,388
Unclassified freight, net tons	24,273	4,074	28,347
Passengers, number	447	420	867

WEST BOUND.

ITEMS.	U. S. Canal.	Canadian Canal.	Total.
Coal (hard), net tons	104,659	24,130	128,789
Coal (soft), net tons	272,476	44,725	317,201
Flour, barrels	.....	.....	.....
Grain, bushels	.....	4,000	4,000
Manufactured iron, net tons	17,043	.....	17,043
Salt, barrels	67,178	8,287	75,465
Unclassified freight, net tons	56,476	11,362	67,838
Passengers, number	743	700	1,443

East bound freight, net tons		2,365,806
West bound freight, net tons		542,262
Total		2,908,068
Total craft through United States canal	1,994	
Total craft through Canadian canal	519	
		2,513
Total registered tonnage through U. S. canal	2,339,456	
Total registered tonnage through Canadian canal	424,597	
		2,764,053

There has been an impression in marine circles that the Lake Superior traffiic in May for last year, exceeded that of this year. On referring to our files we find that last month's shipments of iron ore was 77,113 net tons over that of last May. In grain other than wheat, 2,557,700 bushels passed through the canals more than in last May, and in wheat, no less than 4,601,947 bushels is in excess of the shipment for the corresponding date last year. In west bound cargoes, 67,568 tons of hard coal passed through the canal over and above that of the May shipments for 1898, though in soft coal there is a deficiency of 62,836 tons or so much less was carried last month than for the corresponding month in 1898. This discrepancy was no doubt brought about through vessel owners holding out for fair freights from Ohio ports to Lake Superior. In east bound freights there was an increase of 228,077 tons, west bound 18,010, making a total increase of traffic for May, 1899, over that of May, 1898, of 246,087 tons, also a larger number of vessels and a total registered tonnage.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DIST.,
CHICAGO, ILL., June 12, 1899.

SKILLIGALLEE BLACK CAN BUOY.—Notice is hereby given that the Skilligallee black can buoy, marking the end of a shoal extending in a northwesterly direction from Skilligalee light station, Lake Michigan, reported adrift on June 8th, 1899, was replaced on June 10th, 1899, at 7 a. m.

By order of the Light-House Board:

C. O. ALLIBONE, Commander U. S. Navy,
Inspector 9th Light-House Dist.

The light-house at Corunna, Spain, is believed to be the oldest one now in use. It was erected during the reign of Trajan, and rebuilt in 1634.

NEWS AROUND THE LAKES.

BUFFALO.

Special Correspondence to The Marine Record.

Hingston & Woods, contractors, have bought the tug Fred A. Lee from Charles L. Boynton, Port Huron.

Some difficulty has been experienced in getting the tug Sweepstakes to the St. Lawrence, on account of her draft of water, she will now have to be pontooned through as several other vessels have been.

The tug James F. Martin, owned by Hughes Bros. & Bangs, contractors on government work and valued at $8,000, caught fire on Saturday and only for the brisk efforts of the crew she would have been a goner.

The industrial commission has appointed a sub-committee to visit the northwestern states during July and August to investigate the alleged elevator trust. This committee consists of Senator Kyle, A. L. Harris and E. D. Conger.

The Choctaw arrived here on Monday with a cargo of iron ore, but owing to other vessels being ahead, discharging would not have commenced until Friday. She has ordered to change ports and unload her cargo at Cleveland.

On June 26, Major Symons, Corps of Engineers, U. S. A., in charge of the rivers and harbors in this district, will open bids on the proposals for dredging the harbor at Erie, Pa. The estimated cost of the work mounts way up to $50,000.

The tug Walker, owned by the Montreal Transportation Co., foundered on Lake Ontario last fall in about 11 fathoms. The Donnelly Wrecking and Salvage Co. Kingston, used the schooner Grantham as a pontoon, slung the tug in chains and last week towed her to Kingston.

Hon. J. Israel Tarte, Minister of Public Works for the Dominion of Canada, was in Buffalo this week, looking over the harbor, the breakwater, and other places of interest. He arrived here on his yacht last Sunday, from Port Colborne, and had with him his daughter, his private secretary, and two engineers.

Bishop Quigley has his hands full in the case of the boss scoopers who were suspended from work, and, as he is on the eve of making his first pilgrimage to Rome he desires the dispute settled in a satisfactory manner before he takes his departure, as otherwise the mix up might become more complicated than ever.

The Donnelly Contracting Co., of this port, has secured the contracts on government improvements at Conneaut and Fairport, Ohio, to the amount of nearly $200,000. The Donnelly Co. is one of the best and most reliable firms on the chain of lakes, they employ the highest skilled labor and have on their staff expert and scientific engineers of wide reputation.

The Ogdensburg line boats have been warned by the local lines to keep out of this trade. The Prince loaded a general cargo for Chicago some time ago and last week the Gov. Smith came along and loaded another cargo of package freight brought through the canal by the Stillwell line. There is a feeling against the Inland Transportation Co., the Stillwell canal line, so that the regular Buffalo lines won't carry his west-bound freight, the Ogdensburg boats were then put on the Chicago route for him, but whether they will continue or not is another question.

The steel steamer Harlem, ashore near Isle Royale, Lake Superior, is said to be in a critical position, having settled so that the rocks are punching through her tank tops. Port Huron parties paid $30,000 for the wreck and it is thought that she is likely to prove an expensive wagon by the time she is ready to load cargoes again. There is good metal in her hull and the price of steel is now away up, her engines, boilers, windlass, ground tackle and general equipment was first class and the quickest way to make money out of her is, p'raps, to wreck her. English Lloyds "Stormy Petrels," sent to look after cases like the Harlem, are no spring chickens, and the agent that was here had a good survey of the stranded craft, went quietly back to his hotel in Chicago, advertised for bids and closed up the deal off-hand. They always let the other fellows worry about the best way of "getting from under" in deals of this kind, otherwise it is no cure, no pay.

There is trouble upon trouble in the labor circles of the longshoremen, and now the grain shovelers are the only union men at work. The feeling among the general cargo, coal and ore handlers is uglier than at any time during the summer, and, as non-union men are being put regularly to work, it does not tend to alleviate the situation. About 50 men boarded the Samuel Mather on Wednesday, and fired into a crowd of the same number that were at work discharging her. Although 200 shots were fired no fatalities are reported, some wounded, of course, and sixteen of the shooters were run in. It is a case of union and non-union labor. The W. J. Connors deal was bad enough, and made worse on account of too much interference by outside as well as inside parties, but this strike is in a manner worse, because it is more mixed. Buffalo is a strong labor union port, the union members for obvious reasons are of the same mind, the question now seems to be, is labor to dominate capital and vested interests through a second, third, or fourth party or parties, or is a fair day's labor worth a fair day's pay irrespective of unions, politics, nationality, etc.? The test might as well be applied now as at any other time.

CHICAGO.

Special Correspondence to The Marine Record.

The ground has been broken for the new elevator at 106th street, on Calumet river.

Vessels were in good demand on Monday and Tuesday at 1⅞ cents on corn to Buffalo, and 1⅝ cents to Port Huron.

The work of lengthening slip No. 2 at the Chicago Ship Building Co's. yards at South Chicago, has been commenced.

The dredging of the harbor at Holland was begun Monday, a sixteen-foot channel will be made. At present there is only eleven feet of water.

The harbor at Holland, Mich., is being dredged to a sixteen foot depth, there is only eleven feet depth there now, and it is a port that silts up quickly.

The dredging of the harbor at St. Joseph, Mich., was completed Monday. The river has been dredged from Benton Harbor to its mouth to a depth of sixteen feet.

Inspectors Barr and Pinkerton, of the Chicago grain inspector's office, are under suspension for passing a cargo of 40,000 bushels of corn which Chief Inspector Noble believed should not have been passed.

Business at this port is very active, on Sunday there were twenty-four arrivals, and on Monday thirty-three. Great activity is seen in the passenger business between this port and Milwaukee, and St. Joseph.

The steamer Emerald, which arrived Thursday from Manitoulin Island, had on board a carrier pigeon, which came aboard off Milwaukee. The metal ring on the pigeon was marked 5,12901. Capt. Morgan is taking good care of the bird.

The Holland & Chicago Line commence running on their daily summer service Monday, June 12th, with their steamers Soo City and City of Holland. On June 22nd. the company will begin a double daily service on Fridays, Saturdays, and Sundays.

The repairs to the steamer Thomas Davidson were completed last week at Burger & Burger's drydock, at Manitowoc, about $3,000 was spent on her in repairing the damage sustained by her going ashore on Cana Island, and other work done to her hull and machinery.

The side-wheel excursion steamer Chief Justice Waite has received extensive repairs, aud has passed the inspection of the Government officers. She will be run in the Newman Line in connection with the steamer Ivanhoe and R. J. Gordon between Chicago and Manhattan Beach.

Capt. J. S. Dunham's schooner America will attain the fiftieth year of her age on July 4. The event is to be celebrated by the Dunham Towing & Wrecking Co. Usually the owner tries to hide the ripeness of age of his floating property, but the opposite is the case in this instance.

It is thought that the ordinance now pending in the common council, which provides that every steam vessel 200 feet or more in length shall not navigate the Chicago river unless accompanied by a tug, will be defeated, for the reason that such legislation will have a tendency to divert shipping to South Chicago.

The Goodrich Trans. Co. began its daily service this season on Tuesday, between Chicago, Grand Haven and Muskegon, with their steamers Iowa and Indiana. The steamer Georgie came out of Burger & Burger's drydock at Manitowoc Monday, and arrived here Tuesday. She will be put into service at once on the Mackinac Island route.

Capt. M. DePuy, whose "Paragon" boiler has leaped into sudden popularity, has made an arrangement with the Marine Iron Works, of Chicago, Ill., whereby that firm secures the right to build these boilers for the next five years. Considering their modern methods of doing business and the excellent facilities of their plant, they will no doubt aid in making this type of patent boiler better known.

The Hurson Line steamer F. & P. M. No. 1, had her mast struck by lightning last week, when between Racine and Milwaukee. Capt. Pitman was stunned with the flash, and first mate Creteux practically paralyzed, though it is expected that he will be all right again within a few days. The "funny business" was playing in close quarters with them, and they caught the odor of the brimstone right enough.

The Graham & Morton Trans. Co. have engaged a military band for the season, for service on board their steamers City of Chicago and City of Milwaukee, between Chicago and St. Joseph and Benton Harbor. They intend to run their steamer City of Louisville from Chicago to Waukegan and back, every Saturday. They will begin the service June 17, by giving a free excursion to the poor children of Chicago, under the auspices of the Salvation Army.

The Chicago Board of Assessors has decided that marine property in Chicago cannot be taxed on the tonnage system along the lines of the method adopted in Minnesota, where legislative enactment makes a 3 per cent. tax on tonnage permissible. Attorney Richberg has advised the assessors that he believe that if the Minnesota law was tested in court it would be declared unconstitutional. As a result of this decision the assessors this year will assess the marine property listed at Chicago under the regular form of valuation in vogue on property. Boats will be assessed at 1 per cent. of their fair cash value.

CLEVELAND.

Special Correspondence to The Marine Record.

Capt. F. D. Herriman, of Chicago, visited this port on Wednesday. It is understood that Capt. Herriman will shortly take up his residence in Cleveland.

Charles H. Keep, Esq., secretary of the Lake Carriers' Association, visited this port on Tuesday to attend the meeting of the executive committee of the association.

The large new steel steamer Globe, recently purchased by the Bessemer Steamship Co., after being lengthened, had her final trial trip this week, and was accepted by her new owners.

The Chisholm & Moore Manufacturing Co. have issued their new catalogue containing illustrations and descriptions of chain hoists operated by electricity, compressed air and hand power.

One of the pioneer lake masters, Abraham Hart, passed away at Toledo this week aged 77 years. In the early days he sailed on the first steamer that was on the route between this port and Toledo.

The steamer J. H. Outhwaite arrived here with her first cargo since she stranded on Lake Huron last year. The Outhwaite had a cargo of ore and since her thorough overhauling and rebuild she is a more staunch looking craft than ever.

The Duluth tug strike is over. Concessions were made on both sides. Messrs. Inman and Singer can now go ahead with their season contracts. The dispute was closed at about the right time to prevent radical measures being taken.

The River Machine & Boiler Works, Messrs. Teare and Thomas, proprietors, are as busy as it is possible for them to be on new contracts and repair work, a large portion of which is marine. The firm are also shareholders in vessel property.

Samuel H. Crowl, Esq., who is well known among marine men as a former associate in the office of H. D. Goulder, and later as holding office under the municipality, will continue the general practice of law at 425-426 Cuyahoga Building.

Mr. L. Louis Malm, of the Swedish and Norwegian consulate at this port, who in the years gone by was himself a toiler on the briny deep, says that he hopes the day will soon come when ships of all nations may be seen at the Cleveland docks.

The Cleveland City Forge & Iron Works have received from the Continental Iron Works, of Greenpoint, L. I., an order for a train of 22-inch corrugating rolls. They have also booked an order for the De La Vergne Co. for a crank shaft weighing 11 tons.

The C. & B. line steamer City of Erie made a record passage a trip or two ago, covering the distance to Buffalo in 8½ hours. The Cities of Buffalo and Erie are two fine speedy side-wheel boats and give excellent daily service on the Cleveland-Buffalo route.

The steamers of the Northern Transit Co., Empire State and Badger State, in the passenger sevice between Detroit and Ogdensburg has booked a large number of tourist parties for the next month This route down Lake Ontario offers a most enjoyable week's vacation.

A record of 13,000 gross tons of iron ore, carried at a fraction of over 11 miles an hour, or say 9 knots, is what the S. F. B. Morse, towing a consort, made last week. The Bessemer barge Roebling toted along 7,023 gross tons or 7,866 net tons of ore last season and no one has been able to put a ton more in any of these floating tanks up to date.

The D. & C. Navigation Co. are now opening more fully their passenger and excursion service. The patrons of the line speak well of the attention given to their comfort by the several officers of the company. It is beyond question that the old established D. & C. line has been the most successfully managed of any passenger steamers on Lake Erie. Mr. D. C. McIntyre, general freight and passenger agent at this end of the route, is promptness and affability personified.

A vessel owner has received a letter from Sault Ste. Marie stating that shoal places are forming in certain parts of the cut channel in the river. The steamer Sitka, bound down, grounded Friday afternoon a little above Six-mile Point, opposite the first red stake. Above the lower crib range at Six-mile Point there are some bad spots. The gas buoy at the foot of Sugar Island is about 150 or 200 feet east of where it was placed last season, making the channel narrower and the turn sharper. The buoy is said to be in 17 feet of water.

The Brown Hoisting & Conveying Machine Co. has issued a new 1899 catalogue, devoted to the illustration and description of cranes of various types and capacities, including electric traveling cranes, cantilever and gantry cranes, jib cranes, etc. Following the various sections devoted to certain classes of cranes is given a list of recent purchasers of the type of crane referred to. All cranes illustrated are accompanied by an account of construction and method of operation. To those interested in the installation of hoisting machinery it should prove of great interest. It is bound in cloth and contains 172 6x9-inch pages.

George A. Bassett, commissioner in admiralty, appointed by Judge Ricks, Cleveland, to take testimony in the cases

of Maclaren & Sprague against Sullivan and others, of Toledo, has made a report in which he reduces the towing bill claimed by Sullivan from $950 to $740. The contention in the case is that the bill is exorbitant and the owners of the vessels sought to have it cut down. During last December, after the close of navigation, Maclaren & Sprague had three loaded barges on Lake Erie. Sullivan's tugs were sent after them and towed them to Toledo, cutting their way through several inches of ice. The report will be submitted to the court for approval.

And now there is some talk of a shipbuilding plant being started at Ashtabula, parties having secured an option on river frontage. Capt. James Davidson is wedded to wooden construction or he could make himself a formidable competitor in steel shipbuilding. In the meantime, the Jenks Ship Building Co., of Port Huron, are going right ahead and will soon have a fine modern, commodious plant under way as they are at work on their first metal steamer. It is more than likely that in a few years from now the shipyards, engine and boiler building plants, as well as dry docks, etc., will be more than double what they are now and adequate competition will be found to maintain a fair balance of profits in the field of legitimate industrial competition, without any cut throat tactics being resorted to as in the past.

A salutary change from the monotonous street car ride is a trip in the handsome little passenger steamers to Euclid Beach Park, leaving the foot of Superior street at regular intervals. It is the aim of the proprietors to keep the park and all pertaining thereto as orderly and select as a family resort should be. The lake front route to the park is by the sister boats Duluth and Superior, both of which were built at this port for service as ferry boats between the ports which they are named after. As a proof of their seaworthiness these capital little vessels steamed all the way from Cleveland to the head of navigation on Lake Superior, being afterwards in the excursion trade between Chicago and the World's Fair. They are in charge of experienced officers and everything is done for the comfort and convenience of their passengers. Various sports, games and other attractive features of amusement are on the grounds each day.

Messrs. Miller & Johnson are a new firm of boiler makers starting at 110-112 Elm street. The shops are commodious and they have a water frontage of 200 feet on Sycamore slip. Besides marine and stationary boilers, special attention is to be given to all kinds of sheet iron work and marine repairs, the shop being fitted up with the latest and best tools to facilitate the prompt completion of all orders and contracts which they may undertake. Both members of the firm were formerly marine engineers, added to which they have had considerable business experience ashore. Quincy Miller was for several years superintendent of the boiler works department of the Cleveland Ship Building Co., and D. W. Johnson recently resigned his position as inspector with the Hartford Boiler Insurance Co. Both men have a large acquaintance in the marine community, and their business is likely to prove a very prosperous one.

The fine twin screw exclusively passenger steamer North Land, of the Northern Steamship Co., arrived here Wednesday from Buffalo bound to Duluth and way ports on her first trip of the season. This steamer and her sister ship, the North West, are the pride of the lakes in so far as the passenger service is concerned. Fair rates are charged for transportation, but there is every convenience to be found on board and a wide difference is noticeable between this and other lines in the uniform courtesy and attention given to passengers. This in itself is quite an important feature and one which managers as well as passenger agents would do well to watch more closely than has been done in the past. The conduct of subordinates often make passengers feel sort of grumpy and they communicate this feeling to others, thus is the influence spread both at the time and for the future.

Bids were received on Monday last by Col. Jared A. Smith, Corps of Engineers, U. S. A., in charge of the conservancy and improvement of rivers and harbors within this district, for the work of constructing a breakwater at the ports of Conneaut and Fairport. There is an appropriation of $112,000 for the work at Fairport and $87,000 at Conneaut. Instead of receiving bids for the whole work it was decided that one section would be bid upon, and from this unit the whole work might be judged. The unit on which the bids were submitted was a crib 216 feet in length. For constructing this one crib at Fairport, the following bids were submitted: L. P. & J. A. Smith Co., Cleveland, $33,046.04; J. B. Donnelly, of Buffalo, $24,428.60; J. J. Churchyard, of Buffalo, $27,579.69. The bids received for the crib at Conneaut were as follows L. P. & J. A. Smith Co., Cleveland, $29,442.84; J. B. Donnelly, Buffalo, $23,404.20; J. J. Churchyard, of Buffalo, $25,952.49; E. J. Hingston, of Buffalo, $24,101.40. On these bids the whole work will be computed. It shows that Mr. Donnelly is the lowest bidder on both contracts, and while the recommendation of Col. Smith is not known, it is reasonably certain that he will advise that tne lowest bidder be awarded the contract.

Captain C. O. Flynn, whose steamer R. G. Stewart was recently destroyed by fire at Michigan island, has bought the steamer City of Marquette to take the route of the lost boat. J. M. Longyear, of Marquette, has taken an interest with him in the new boat. The City of Marquette is 125 feet in length and carries 250 tons.

DETROIT.

Special Correspondence to The Marine Record.

The revenue cutter Fessenden is in command of Capt. D. B. Hodgsdon. He was in the brush at Manila. Lieut. Byron L. Reed is again appointed to the old craft after an absence of eight years.

Ralph Germain, twenty years old, lookout on the steamer W. H. Stevens, of the Union Transit Co., was drowned about three miles outside the Buffalo breakwater last Thursday night. He hailed from this port.

The shipyard at Wyandotte has found so much difficulty in having their orders filled for steel that work has been temporarily suspended until material enough can be got together to start work again with some hope of keeping it going.

Since the recent decision at Milwaukee regarding the alien labor law, the emigration inspector here is not quite so sure of his ground, position or authority as he formerly thought he was. Skilled artisans, clerks, etc., are no longer to be considered as alien laborers.

Capt. John Mitchell, vessel owner and broker, of Cleveland, visited Detroit this week and called on all his marine friends, the shipyards, dry docks, etc. Capt. John is a keen business man, affable and sociable, so that he is well liked by all with whom he is brought into contact. His disposition is a foe to dyspepsia.

Capt. J. W. Westcott has sent the following notice to the members of the Lake Carriers' association: "On and after June 9, guage signals will be shown from the coal docks. When the eighteen- oot signal is up there will be eighteen feet of water or better at Limekiln crossing and Ballard's reef; any less draft will be shown, but no greater."

The wooden schooner Santiago was successfully launched from the Davidson yards at Bay City on Thursday last. She is 335 feet long, 45½ feet beam, and has a capacity of 175,000 bushels of wheat. Capt. Davidson is never at a loss for an appropriate name for his new vessels and perhaps he will give us a Porto Rico, Havana or Matanzas next.

The Duluth tug strike cost the Missabe road, docks and mines, more, perhaps, than any other one interest. It is estimated that the loss to this interest every day that the strike was on was upwards of $10,000. The docks were blocked with ore and ore trains had to be taken off. Several of the steam shovel mines were shut down wholly, or in part, and 2,000 men were unfavorably affected as to their time and wages.

Capt. Holmes, of the Bradley steamer Heeper, wrote to the Detroit lighthouse inspector's office that the schooner John Martin, which he had in tow, Thursday last, bound up, was made to sheer by another boat passing close by and ran into and carried the Ballard's reef gas buoy 100 feet out of its position. He thinks it is not damaged, however. Capt. Reaney, of the Detroit office, telegraphed the Buffalo inspector, in whose district the buoy lies. Mr. Bradley will be asked to pay for replacing the buoy, and for any damage it may have suffered. It would be just as much in order, and perhaps a little more so, if the boat that caused the Martin to sheer was made to stand the expense, or at least a portion of it.

The story is told of Gen. William Ludlow, now military governer of Havana, that when he was stationed at Detroit some years ago, in charge of river and harbor works, he was visited by a contractor who wanted to do some government work. With his visiting card, by way of further introduction, the contractor put down on the table a crisp $50 bill. Ludlow made no sign as to whether he noticed this or not, but saying they had better smoke while talking, drew forth two cigars and gave the contractor one of them. Then, turning to the table and not seeing a match, he took the $50 note, twisted it into a lighter, set it aflame at the open grate fire, and lit his cigar slowly and carefully. Then he handed the burning stump of the bill to the contractor.

The Bessemer line tow barge Alfred Krupp, Capt. Samuel Lewis, was willfully grounded on Harsen's Island last Friday to avoid colliding with a steamer bound the opposite way. The Krupp was afterwards lightened and released with the assistance of Parker & Millens' wrecking tug Wales. The question now is, who is to pay the expenses? A steamer must at all times give way to a sailing vessel or stand the consequences. Capt. Lewis may have acted right, but he has no right to soak his owners for another man's fault, ignorance or carelessness. The Krupp is now entitled to go into dry dock for a survey, if even the slightest bottom damage is anticipated. The Parker & Millen tug Saginaw also released the steamer Montana grounded at Southeast Bend after lightering about 500 tons of her cargo.

Wrecking master James Reid is still after the Cayuga, lying in 16 fathoms near the Straits of Mackinac. The steel steamer Cayuga, of the Lehigh Valley Line, was sunk four years ago in collision with the small wooden steamer Joseph L. Hurd. She was bound from Chicago to Buffalo with a cargo of merchandise and grain, ship, freight and cargo being valued at about $350,000. Capt. Reid conceived the scheme of sinking steel pontoons around the wreck, and then by filling the pontoons with air to bring the steamer to the surface. He has had all kinds of bad luck, divers being disabled by working in such deep water, and last fall the tug he had at the wreck was burned. Capt. Reid is about the only person who calculated on floating the Cayuga and he may get her eventually, but it is taking an unconsionably long time to do it.

It is only right to think that they have some sort of talent across "the pond," and yet Capt. John Quinn, of the Swain Wrecking Co., would just have given himself about four days, with his own wrecking plant, to float the Paris, stranded on the Manacles. He says: "Wrecking on fresh water has reached its highest perfection and with the elaborate wrecking outfits available, the lake mariner never thinks of giving up his boat until the last dog is hung." The Swain Wrecking Co. has tackled some "forlorn hopes" with success, and there is nothing too remote for Capt. Mart Swain to take hold of. The one marked feature of the company is, that whatever is taken in hand, is done expeditiously, no half-way measures, or lost time and opportunity is permitted and they generally, if not always, get what they go after. So that Capt. Quinn may be more than half right in his weighing up the situation of the now abandoned Paris.

CANADIAN GRAIN SHIPMENTS.

The Canadian Pacific Railway has given notice to the grain trade of the northwest that in the shipment of bulk wheat from Fort William to Montreal for export by its steamers via Owen Sound, it will deliver to barges at Montreal or to ocean steamships (if the grain is loaded direct from the elevator to the steamer) the exact quantity of grain specified on the bill of lading, but will not assume any responsibility for any difference in outturn from the barges to the ocean vessel in the port of Montreal. On all rail shipments the company will deliver to barges or to steamers if alongside the elevators the actual inturn of the car and will not assume any responsibility for subsequent shortages.

CONTRACT LET FOR TWO ATLANTIC LINERS.

Second vice-President J. A. Wright Jr., of the International Navigation Co., (American Line) announces that the contract for the construction of two new vessels for the line had been placed with the Cramps in Philadelphia. While neither of these vessels is intended to replace the wrecked Paris, nor are they to be record-makers and gainers in speed, both are to be ships of the first class. Each is to be of 12,000 tons register and will have a length of 600 feet, with 60 feet beam. They will carry about 400 cabin and 800 steerage passengers, and will have a large freight capacity. It is expected that the vessels will be completed by the latter part of next summer at the latest.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, TENTH DIST.,
BUFFALO, N. Y., June 14th, 1899.

Notice is hereby given that the color of the tower at Detroit river light station, Michigan, was changed from brown to white on June 10, 1899.

The light in Lower Narrows gas buoy No. 2, St. Lawrence river, New York, notice of the temporary discontinuance of which on May 13 for repairs was given on May 20, 1899, was re-exhibited on June 12, 1899.

FRANKLIN HANFORD, Commander U. S. N.,
Inspector 10th L. H. Dist.

MARINE LETTERS ADVERTISED AT DETROIT, MICH., POST OFFICE, JUNE 15, 1899.

Berghins Paul, Str Gratwick	Herbert Alex.
Cook Frank, Str America	McCall Jos.
Crutchfield Herbert	Mathews Irving
Canfield C. H. Str Columbia	Outhwaite S., Str Germanic
Du Chene Chas.	Rowe Burt
Emmons Chas. H., Str Sitka	Shuttel Edw.
Garey Jos., Str Empire City	Shaltz Wm., Str R. Richards
Gurmask H., Str Sitka	Traub E.
Henderson Geo. Str Hackett	Wilkes Stephen, Str Tioga
Haskell Frank	

Liability of Owners—Right of Limitation.—Where the owners of a steamer started her on a voyage on a clear morning in a seaworthy condition, properly manned and equipped, and furnished with licensed and experienced master and pilots, and the assistance of a tug, the negligence of her officers and pilots in permitting her to come in collision with a bridge pier, must be held to have been without the priority of knowledge of the owners, so as to entitle them to a limitation of their liability for damages resulting from such collision to passengers and cargo. Memphis & C. Packet Co. vs. Overman Carriage Co. et al., 93 Fed. Rep. (U. S.) 246.

Capt. Miles Barry has bought the steamer R. A. Packer for $12,000, from the Lehigh Valley Transportation Co., Buffalo. The Packer was valued last year for insurance purposes at $32,500, classed A 2. She is a wooden steamer 770 tons net, built in Bay City in 1881, but she has been well kept up, and is a good, sound vessel to-day, but of course rather small for the general cargo trade, or bulk cargo either for that matter. Capt. Barry ought to dismantle and make a tow barge or lighter out of her. However, it is now said that it is the intention of the Barry Line to put this boat in the lake carrying trade, and a fleet of considerable size will eventually be established by the Barrys for lake transportation service. Eastern marine men have recently offered Capt. Barry a position as manager of a fleet of vessels in the coast trade, with headquarters at Newport News, Va., but he refused to consider the change.

CONTRACTS FOR MARINE HOSPITAL SERVICE.

Supervising Surgeon-General Walter Wyman has entered into the following contracts for the care of lake seamen for the fiscal year ending June 30, 1900. Charges are allowed for the day of admission of the patients, but not for the day of discharge or death.

On account of the limited sources of income and the large expenditures for relief, officers are notified of the necessity of discharging patients promptly upon the termination of the necessary hospital treatment.

Upon admission to a contract hospital of a patient with a disease or injury which, in the opinion of the medical officer, the acting assistant surgeon, or physician in charge of the case, will require more than twenty days' treatment in hospital, the officer issuing the permit will at once request authority from the Bureau to transfer such patient to the nearest marine hospital, provided the patient's condition, in the opinion of the medical officer, the acting assistant surgeon, or physician in charge of the case, is such to admit of transportation.

Ashtabula, Ohio.—The medical attendance to be furnished by an active assistant surgeon; Mrs. Henry Whelpley to furnish quarters, subsistence and nursing, at $1 a day; contagious diseases, $1.50 a day; John Druco & Sons to provide for the burial of deceased patients at $14.50 each.

Ashland, Wis.—Dodd's hospital to furnish quarters, subsistence, nursing, medical attendance and medicines, at 75 cents a day; contagious diseases, $1 a day, and to provide for the burial of deceased patients at $9 each.

Buffalo, N. Y.—The medical attendance to be furnished by a medical officer of the marine hospital service; Buffalo hospital (Sisters of Charity) to furnish quarters, subsistence, nursing and medicines, at $1 a day. The health commissioners of the city of Buffalo to care for contagious diseases at $2 a day; McDonald & Ray to provide for the burial of deceased patients, at $10 each.

Chicago, Ill.—Hospital patients to be cared for in the U. S. marine hospital; B. E. Arntzen to provide for the burial of deceased patients at $13.50 each.

Cleveland, Ohio.—Hospital patients to be cared for in the U. S. marine hospital; Flynn, Abel & Froelk to provide for the burial of deceased persons at $14 each, and to furnish ambulance service, at $1 for each patient.

Detroit, Mich.—Hospital patients to be cared for in the U. S. marine hospital; J. W. Maney Company to provide for the burial of deceased persons, at $7.75 each.

Duluth, Minn. The medical attendance to be furnished by an acting assistant surgeon; St. Luke's hospital to furnish quarters, subsistence, nursing, and medicines, at 75 cents a day; John W. Stewart to provide for the burial of deceased patients, at $15 each.

Erie, Pa.—The medical attendance to be furnished by an acting assistant surgeon; Hamot hospital association to furnish quarters, subsistence, nursing and medicines, at 71 cents a day; the board of health of the city of Erie to care for contagious cases, at $3 a day.

Escanaba, Mich.—The medical attendance to be furnished by an acting assistant surgeon; Delta county hospital to furnish quarters, subsistence, and nursing, at $1 a day; D. A. Oliver to provide for the burial of deceased patients, at $15 each.

Grand Haven, Mich.—The medical attendance to be furnished by an acting assistant surgeon; Anna Farnham to furnish quarters, subsistence, and nursing, at $1 a day; A. Kiel to provide for the burial of deceased patients, at $12 each.

Green Bay, Wis.—The medical attendance to be furnished by an acting assistant surgeon.

Ludington, Mich.—The medical attendance to be furnished by an acting assistant surgeon; Mrs. H. D. Linsley to furnish quarters, subsistence and nursing, at 80 cents a day; H. M. Hallett to provide for the burial of deceased patients, at $14.99 each.

Manistee, Mich.—The medical attendance to be furnished by an acting assistant surgeon; Mercy hospital to furnish quarters, subsistence, nursing and medicines, at 90 cents a day; W. P. Switzer to provide for the burial of deceased patients, at $11.60 each.

Marquette, Mich.—The medical attendance to be furnished by an acting assistant surgeon; St. Mary's hospital to furnish quarters.

Milwaukee, Wis.—The medical attendance to be furnished by an acting assistant surgeon; St. Mary's hospital to furnish quarters, subsistence, nursing and medicines, at 80 cents a day. Patients who require hospital treatment and whose condition, in the opinion of the acting assistant surgeon, will permit their transportation with perfect safety, shall be sent to the marine hospital at Chicago, Ill.

Ogdensburg, N. Y.—The medical attendance to be furnished by an acting assistant surgeon; city hospital to furnish quarters, subsistence, nursing and medicines, at $1 a day; contagious diseases, at $2 a day; H. S. Nutall to provide for the burial of deceased patients, at $9.23 each.

Oswego, N. Y.—The medical attendance to be furnished by an acting assistant surgeon; Oswego hospital to furnish quarters, subsistence, nursing, and medicines, at $1 a day. John F. Dain & Son to provide for the burial of deceased patients, at $15 each.

Port Huron, Mich.—The medical attendance to be furnished by an acting assistant surgeon.

Sandusky, Ohio.—The medical attendance to be furnished by an assistant surgeon. Patients requiring hospital treatment will, if able to bear transportation, be sent to the marine hospital at Portland, Me.

Saginaw, Mich.—The medical attendance to be furnished by an acting assistant surgeon; St. Mary's hospital to furnish quarters, subsistence, nursing and medicines, at 90 cents a day; contagious diseases, at $2 a day.

Sault Ste. Marie, Mich.—The medical attendance to be furnished by an acting assistant surgeon.

Sturgeon Bay, Wis.—The medical attendance to be furnished by an acting assistant surgeon; Maggie Dunlap to furnish quarters, subsistence, and nursing at $1 a day; H. J. Hahn to provide for the burial of deceased patients at $13.50 each.

Superior, Wis.—The medical attendance to be furnished by an acting assistant surgeon; St. Mary's hospital to furnish quarters, subsistence, nursing, and medicines, including contagious diseases, at 90 cents a day.

Toledo, Ohio.—The medical attendance to be furnished by an acting assistant surgeon; Toledo hospital association to furnish quarters, subsistence, nursing and medicines, at 75 cents a day; contagious diseases, at $1.50 a day, and to provide for the burial of deceased patients, at $12 each.

The rate for quarters, subsistence and nursing will be fixed by the Bureau in each special case at Port Huron, Mich, Green Bay, Wis., and Sault Ste. Marie, Mich.

The rate of charge for seamen from vessels of the Coast Survey, admitted to hospital under the provisions of the regulations, and of foreign seamen admitted under the act of March 3, 1875, is hereby fixed at the uniform rate of $1 a day.

SUN'S AMPLITUDES.

The following approximate amplitudes of the Sun's rising will be given each week in this column during the season of navigation. A second bearing may be taken by compass at sunset, by reversing the east bearing, given for the nearest latitude, as the change in declination for a few hours makes but a slight difference in the true bearing of the Sun's setting. The bearing may be taken when the sun's center is on the horizon, rising or setting. The three elements which may be obtained by taking these amplitudes are the quantities known as local attraction, variation and deviation.

LAKE ERIE AND S. END LAKE MICHIGAN, LAT. 42° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
June 16.....	E. 32° N.	= N. 5⅛ E.	= N. E. by E. ⅛ E.
June 19.....	E. 32° N.	= N. 5⅛ E.	= N. E. by E. ⅛ E.
June 23.....	E. 32° N.	= N. 5⅛ E.	= N. E. by E. ⅛ E.

LAKE ONTARIO, S. END HURON AND CENTRAL PORTION LAKE MICHIGAN, LAT. 44° N.

Sunrise.	Amplitudes.	Bearing P'ts,	Bearing Comp.
June 16.....	E. 33° N.	= N. 5	E. = N. E. by E.
June 19.....	E. 33° N.	= N. 5	E. = N. E. by E.
June 23.....	E. 33° N.	= N. 5	E. = N. E. by E.

N. END LAKES HURON AND MICHIGAN, LAT. 46° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
June 16.....	E. 35° N.	= N. 4⅞ E.	= N. E. ⅞ E.
June 19.....	E. 35° N.	= N. 4⅞ E.	= N. E. ⅞ E.
June 23.....	E. 35° N.	= N. 4⅞ E.	= N. E. ⅞ E.

LAKE SUPERIOR, LAT. 48° N.

Sunrise.	Amplitudes.	Bearing P'ts.	Bearing Comp.
June 16.....	E. 36° N.	= N. 4¾ E.	= N. E. ¾ E.
June 19.....	E. 36° N.	= N. 4¾ E.	= N. E. ¾ E.
June 23.....	E. 36° N.	= N. 4¾ E.	= N. E. ¾ E.

With a compass correct magnetic, the difference between the observed and true bearing or amplitude will be the variation for the locality. Should there be any deviation on the course the vessel is heading at the time of taking the bearing, the difference between the observed and the true amplitude after the variation is applied will be the amount of deviation on that course. If the correct magnetic bearing is to the right of the compass bearing, the deviation is easterly, if to the left, the deviation is westerly.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone Secretary Chicago Board of Trade.

Cities Where Stored.	Wheat. Bushels.	Corn. Bushels.	Oats. Bushels.	Rye. Bushels.	Barley Bushels.
Buffalo	598,000	665,000	549,000	43,000	213,000
Chicago	4,782,000	5,302,000	1,214,000	330,000	567,000
Detroit	134,000	148,000	14,000	5,000	1,000
Duluth and Superior	6,112,000	514,000	897,000	119,000	111,000
Milwaukee	12,000	4,000	4,000	.....	77,000
Montreal	459,000	89,000	486,000	4,000	12,000
Toledo	805,000	767,000	183,000	1,000	.....
Toronto	23,000	.....	14,000	.....	10,000
On Canal	7,550,000	17,000	795,000	25,000	156,000
On Lakes	1,136,000	2,149,000	870,000	.....	3,000
Grand Total	27,601,000	13,236,000	8,005,000	892,000	1,264,000
Corresponding Date, 1898	19,682,000	21,445,000	7,113,000	1,178,000	497,000
Increase	1,416,000	.....	231,000	40,000	.....
Decrease	.....	66,000	.....	.....	78,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

SHIPPING AND MARINE JUDICIAL DECISIONS.

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

Collision—Fog—Ferry Boat.—A ferry boat which cannot, owing to the public necessities, entirely stop making trips, even when there is a fog which makes navigation dangerous, cannot be held in fault for a collision, if carefully and skillfully handled, and having no notice of any obstruction by signal or otherwise. Hughes vs. Pennsylvania R. Co. et al., 93 Fed. Rep. (U. S.) 510.

Maritime Liens—Brokerage for Commissions for Procuring Seamen.—Brokers employed to negotiate contracts incidental to commerce carried on by vessels navigating the seas, such as shipping agents employed to procure crews for vessels, are not entitled to a lien upon the vessels for their commissions. The Retriever, 93 Fed. Rep. (U. S.) 480.

Manœuvre in Extremis.—The fact that the C. stopped her engines three minutes before the collision, and backed one minute, thereby canting her head slightly to the starboard, nearer the scow, being a manœuvre "in extremis," and in compliance with the rule requiring reversal in imminent danger, did not render her at fault. The Chalmette, 93 Fed. Rep. (U. S.) 500.

Seamen—Suit to Recover Wages—Forfeiture of Wages Earned.—A court will not decree a forfeiture of the wages of seamen for time actually served because they were not fully justified in leaving the vessel at the time they did, before the expiration of their term of service, where the answer to their libel does not ask such relief, nor charge them with desertion, or other substantial grounds for such forfeiture. The A. M. Baxter, 93 Fed. Rep. (U. S.) 479.

Maritime Liens—Postponement by Laches—Failure to Issue Process on Libel Filed.—The delay of a libelant in rem in having proceeds issued for the seizure of a libeled vessel after the filing of libel, by which the vessel is allowed to pursue her ordinary business, constitutes laches, as against persons who thereafter and before her seizure furnish supplies to the vessel in good faith, and postpone his lien to theirs. The F. W. Vosburgh, 93 Fed. Rep. (U. S.) 481.

Transshipment of Cargo.—If the vessel in this case was justified in discharging the cargo under a clause of the bill of lading permitting her to transship in case of emergency, rather than to subject herself to a delay of unknown duration, such clause being for the benefit of the vessel alone, on its being ascertained that she might have proceeded within a reasonable time, the cost of the discharge, storage, and reloading must be borne by her. The Styria, 93 Fed. Rep. (U. S.) 474.

Seamen—Improperly Furnished Quarters—Right to Abandon Service.—To justify seamen in leaving their vessel before the expiration of their term of service because of a failure to properly heat their quarters in cold weather as required by Act March 3, 1897, (29 Stat. 687 Sec. 2) so as to entitle them to wages for the unexpired time, it should be shown that they made complaint to the captain, and requested that the fault be remedied. The A. M. Baxter, 93 Fed. Rep. (U. S.) 479.

Compensation for work outside of Contract.—Seamen may be required to perform extra work in maneuvering the ship or handing cargo by the master at any time, he being the sole judge of its necessity; but when required to do such work not contemplated by their shipping articles, and which is merely for the advantage of the owners or charterers, they are entitled to recover reasonable extra wages therefor, or, if induced by promise of payment, to recover the amount agreed upon. The Lakme, 63 Fed. Rep. (U. S.) 230.

Shipping — Seaworthiness — Inspection.—The inspection required as to the seaworthiness of a vessel is anticapatory, and not alone for the discovery and correction of defects from which harm has arisen; and a system which contemplates a general overhauling and inspection of the vessel only every four years, and between such times only a general examination by the officers at the end of a voyage to ascertain whether there had been leakage, is inadequate to meet the requirements of the law. The Aggi, 93 Fed. Rep. (U. S.) 484.

Maritime Liens — Rights of Co-Defendant.— A libelant entitled to recover damages for an injury against two vessels as joint and several wrong doers may elect to proceed against either or both; and hence, where he joins both in his libel, his failure to issue process against one does not constitute laches of which the other can complain, though it is compelled by reason of such fact and the consequent intervention of other liens against its co-defendant to bear more than its just proportion of the recovery. The P. W. Vosburgh, 93 Fed. Rep. (U. S.) 481.

Repairs to be Completed on Land—Where a new engine was specially manufactured at libelant's factory for a vessel then in port, to which it was shipped on completion, and it was agreed that the libelant should retain title in the engine until it has been set up, and found to work satisfactorily, the delivery was not complete until after the engine had been placed and operated on the vessel, and hence was not a contract for repairs to be completed on land, so as to prevent the attachment of a maritime lien therefor. The L. B. X., 93 Fed. Rep. (U. S.) 233.

WEATHEROLOGY.

Prof. Willis L. Moore, Chief of the Weather Bureau, has just published with the approval of Hon. James Wilson, Secretary of Agriculture, a brochure of 20 pages on the subject of weather forecasting, etc., from which we take the following excerpts:

That we live in an age of great intellectual acumen, and that he is indeed a wise prophet who can outline, even dimly, the possibilities of the next century, is effectively shown by the development of meteorological science within the recollection of the present generation; although one must admit that in the making of weather forecasts—valuable as these in general are—we have not advanced much beyond the empirical stage. Nor have we any prospect that we shall ever attain the accuracy acquired by the astronomers in predicting the date of an eclipse or the occurrence of celestial events.

It was not until 1643, twenty-three years after the landing of the Pilgrims on Plymouth Rock, that Torricelli discovered the principle of the barometer, and rendered it possible to measure the weight of the superincumbent air at any spot where the wonderful, yet simple, little instrument might be placed. Torricelli's great teacher, Galileo, died without knowing why nature, under certain conditions, abhors a vacuum; but he had discovered the principle of the thermometer. The data from the readings of these two instruments form the foundation of all meteorological science. Their inventors as little appreciated the value of their discoveries as they dreamed of the Great Western Empire which should first use their instruments to measure the inception and development of storms.

As early as 1738, Dr. John Lining, of Charlestown, S. C., kept a record of the daily temperature in this country. The accurate thermometers of Fahrenheit had then been in use but a few years; and, compared with the fine instruments now used for measuring temperature, the error due to imperfect mechanical construction, was probably considerable. About one hundred years after the invention of the barometer, viz., in 1747, Benjamin Franklin, patriot, statesman, diplomat, and scientist, divined that certain storms had a rotary motion and that they progressed in a northeasterly direction. It was prophetic that these ideas should have come to him long before any one had ever seen charts showing observations simultaneously taken at many stations. But, although his ideas in this respect were more important than his act of drawing the lightning from the clouds and identifying it with the electricity of the laboratory, yet his contemporaries thought little of his philosophy of storms and it was soon forgotten. It will be interesting to learn how he reached his conclusion as to the cyclonic or eddy-like structure of storms. * * *

Relative to climatic changes in 1781, Jefferson said: "A change in climate is taking place very sensibly. Both heats and colds are becoming much more moderate within the memory of even the middle-aged. Snows are less frequent and less deep. They do not often lie below the mountain more than one, two or three days, and very rarely a week. The snows are remembered to have been formerly frequent, deep, and of long continuance. The elderly inform me that the earth used to be covered with snow about three months in every year."

But Jefferson and his neighbors were mistaken. Never during the period of authentic history has the snow covered the ground in Virginia for periods averaging three months per year for three years in succession. The old inhabitants of Jefferson's time were like those of to-day—they remembered only the abnormalities of the climate of 25 or 50 years before, and in comparing the unusual conditions of long ago with the average of the present they were deceived. I have known intelligent and truthful men publicly to declare that they knew, from personal recollection, that the climate of their particular places of residence had changed since they were boys—that they had reliable landmarks to show that the streams were drying up, that the precipitation was growing less, and that the winters were becoming milder—notwithstanding the fact that carefully taken observations of temperature and rainfall for each day for the previous hundred years showed no alteration of climate at such places. Of course, wide variations, sometimes extending over periods of several years, had occurred; but a deficit at one time was made up by an excess at another. To be sure, changes must have taken place during the geological periods; but these have been so slow that it is doubtful whether man in his civilized state has occupied the earth long enough to discover an appreciable quantity. Quite accurate records of the opening of navigation in the rivers of Europe and of the time of vintages for 500 years show no change in the average data of the first 10 years as compared with the average of the last 10; and the date palm, the vine and the fig tree flourish as luxuriantly to-day in Palestine as they did in the days of Moses. Dried plants have been taken from the mummy cases of the Pharaohs exactly similar to those now growing in the soil once trod by those ancient monarchs.

Twenty-five years ago mariners on our Great Lakes and seaboard depended on their own weather lore to warn them of coming storms. Then, although the number of craft plying on our waters was much less than now, every severe storm that swept the lakes or Atlantic coast left destruction and death in its wake, and for days afterward the dead were cast up by the receding waves, and the shores were lined with wreckage. Some idea of the vast interests floating in Atlantic ports may be had when it is stated that 5,628 trans-Atlantic steamers, with an aggregate of 10,076,148 tons, and 5,842 sailing craft, aggregating 2,105,688 tons, enter and leave ports on the Atlantic seaboard during a single year. The value of the cargoes is more than a billion and a half of dollars. Our coastwise traffic also is enormous. In one year more than 17,000 sailing vessels and 4,000 steamers enter and leave ports between Maine and Florida. Their cargoes are estimated to be worth $7,000,000. From these facts one can roughly measure the value of the marine property which the Department of Agriculture, through the work of the Weather Bureau, aims to protect by giving warning of approaching storms.

It is the dream of the meteorologist that some day he will be able accurately to forecast the weather weeks and months in advance. But so far this much-to-be-desired object can be realized only in a dream.

Our Weather Bureau maintains about 200 regular meteorological stations, each in charge of a trained observer, advantageously located geographically for the taking of observations. The transmission of reports is accomplished with remarkable rapidity by means of an effective arrangement of telegraphic circuits. Observations from all parts of the United States and Canada, from the Atlantic to the Pacific, are collected at Washington within thirty minutes after the observers have read the station instruments and filed their observations. Synoptic charts are prepared in the central offices at Washington and Toronto, and at many of the large stations at which reports are reeeived; and by 9 o'clock (seventy-fifth meridian time) the charts are complete. The chart of greatest value to the forecaster contains for each station the temperature, barometric pressure, wind direction and velocity, weather conditions—whether raining, snowing, cloudy, partly cloudy or clear—and the amount of precipitation, if any. * * *

THE ARMOUR-MARION COLLISION.

(The British and Foreign Marine Insurance Co. vs. W. M. Egan.)

A decision of interest to vessel owners, agents and underwriters, as well as general marine insurance agents, was rendered by Judge Smith of the Cook County Circuit Court on June 8, 1899, in the case of the British & Foreign Marine Insurance Co. v. W. M. Egan.

Capt. Egan was a one-third owner of the propeller P. D. Armour, which was sunk in the St. Clair river September 7, 1889, by a collision with the Marion. His interest was insured for $30,000, of which $7,500 was carried by the British & Foreign on a policy in which the value of the vessel was placed at $100,000. The policy also contained a provision that in case of loss, the insured in accepting payment under the policy, by that act assigned and transferred all his right to recover for such loss against the person causing the same, to the insurance company, to the extent of the amount paid by the company and attendant expenses of recovery.

At the time of the accident the Armour was a new boat, having just been finished at a cost of $135,000 and a suit in admiralty was begun by the owners against the Marion and her owners to recover that amount. A long and expensive litigation followed, during which the Armour was raised and repaired and the total loss adjusted at about $74,000. The underwriters on the Armour were not requested by the owners to take any part in or contribute to the expense of the litigation, but paid their share of the loss promptly on adjustment; in fact, made liberal advances on account, as soon as the vessel was raised and before the repairs were made.

The litigation with the Marion was finally settled by a compromise which included the underwriters on the cargo, who had joined with the hull owners, and after paying the expenses of the litigation and giving the cargo underwriters their agreed share of the amount received from the Marion in settlement, Capt. Egan received as his share of the balance, the sum of $5,020.

The British & Foreign thereupon demanded its pro rata share of this amount, which was refused, and suit was brought to enforce payment. The suit was defended on the ground that the insurance company, having contributed nothing to the expense and assumed none of the risk of the suit, was not entitled to share in its proceeds, but the court held that under the provisions of the policy, Egan became a trustee for the company to the extent of its pro rata interest, in any amount recovered by him from the Marion, and accordingly gave judgment for the company for that amount, about $1,100, and interest. Messrs. Church, McMurdy & Sherman, of Chicago, conducted the case for the plaintiff. C. E. Kremer, Esq., appeared for Capt. Egan.

MECHANICAL DRAFT.

Mr. Walter B. Snow, of the engineering staff of the B. F. Sturtevant & Co., Boston, Mass., delivered a lecture recently before the engineering society on "The Influence of Mechanical Draft Upon the Ultimate Efficiency of Steam Boilers."

Mr. Snow stated in his address that mechanical draft in its accepted form consists of a fan blower enclosed in a case and provided with the necessary means for its operation. Mechanical draft may be applied under either of two general methods, the plenum or the vacuum. Which is to be employed must depend upon the circumstances, for it cannot be asserted that either is unqualifiedly superior under all conditions. As ordinarily applied, under the plenum or forced-draft method the air is delivered to the closed ashpit under pressure, and thence finds its escape through the fuel on the grates above. Its success depends largely upon the manner or introduction of the air to the ashpits.

On shipboard, and particularly in the naval marine, it is frequently impossible to employ the closed ashpit method, and resort is, of necessity, made to the closed fire-room system, under which the air is forced into an air-tight boiler room, in which considerable pressure above the atmosphere is thus maintained, and from which the air passes to the open ashpits and thence through the fire to the stack. Space is extremely valuable in the marine boiler room, and, therefore, small, rapidly running fans are desirable, each provided with an engine of special type to make the continued high-speed possible.

In operation, the fan is both positive and flexible, independent of the weather, but capable of regulation to the finest degree and of adjustment to the necessities of the fire at any particular moment. A mere increase in the cut-off of the fan engine brings about a result secured with a chimney only at the expense of adding to its height, while a change in the fan speed alters both the volume handled and the intensity of the draft produced.

EASTERN FREIGHT REPORT.

Messrs. Funch, Edye & Co., New York, in their weekly freight report to the RECORD state the condition of the market as follows:

Since our last report the business in sail tonnage has again been light. Large vessels are offered a little more freely, but so far rates remain firm, and we do not anticipate any marked decline. Medium and small tonnage, suitable for South America and West India trades, remains scarce, and rates are favoring owners; while but little is doing in case oil in the Far East, and nothing worth mentioning in barrel oil to Europe. Naval store freights are firm on the basis of about 2s. 9d @ 2s. 10½d. for rosin from Southern ports to Cork f. o.

Although there is quite an increase in the amount of steamers taken for full cargoes of grain, the rates secured are somewhat lower, as vessels have been offering more freely for the business. Freights from the Provinces, in sympathy with grain rates, have declined again to 45s., whilst the demand for steamers to load timber cargoes from the South is likewise less active, although no appreciative difference in rates is to be recorded. Business in time charters remains limited, as owners are still holding for higher rates than charterers in this line appear willing to concede at the moment.

MARINE RECORD

ESTABLISHED 1878.

Published Every Thursday by

THE MARINE RECORD PUBLISHING CO.,

Incorporated.

C. E. RUSKIN, - - - - - Manager.
CAPT. JOHN SWAINSON, - - - - Editor.
THOS. WILLIAMS, Chicago, - - - Associate.

CLEVELAND, Western Reserve Building. CHICAGO. Royal Insurance Building.

SUBSCRIPTION.

One Copy, one year, postage paid, - - $2.00
One Copy, one year, to foreign countries, - - $3.00
Invariably in advance.

ADVERTISING.

Rates given on application.

All communications should be addressed to the Cleveland office.

THE MARINE RECORD PUBLISHING CO.,

Western Reserve Building, Cleveland, O.

Entered at Cleveland Postoffice as second-class mail matter.

CLEVELAND, O., JUNE 15, 1899.

THERE is only one admiral in the United States Navy, and that honor has recently been created for Dewey, the only Dewey, Admiral George Dewey, U. S. N. There is some grand mettle among the eighteen rear-admirals, also a wide range of choice, outside of seniority, in the seventy captains and 112 commanders comprising the principal officers of the U. S. Navy.

A THIRD of a mile of construction of highly-tested steel is the latest shipbuilding order for the lakes. Built in line, cut off in 500 feet sections and the ends closed, is nearly the method observed in putting iron ore drogers afloat for lake service. All being sister ships, they can be slapped together with alacrity, also with rivets, and other fastenings, moreover, the work is shorn of its mechanical skill and becomes routine labor, made easy by the use of modern inventions in tools and other appliances, including steam, compressed air and electricity. This is by no means a paid advertisement, nothing of that sort is permitted in the reading columns of the RECORD. In heralding the advent of the new order of lake shipbuilding, we are at liberty though and free to state, that if any of the effete eastern or ambitious western powers desire to dot the ocean with their flag and tonnage, application for the departure would no doubt be considered and perhaps accepted by lake shipbuilders. We are the center of the Orient and Occident and can point the largest class of tonnage toward any cardinal point of the compass.

IGNORANCE or mistake of fact may in some cases be admitted as an excuse. But where the statute commands that an act be done or omitted, which in the absence of such statute might have been done or omitted without culpability, ignorance of the fact or state of things contemplated by the statute, it seems, will not excuse its violation. Thus, for example, where the law enacts the forfeiture of a ship having smuggled goods on board, and such goods are secreted on board by some of the crew, the owner and officers being alike innocently ignorant of the fact, yet the forfeiture is incurred notwithstanding their ignorance. Such is also the case in regard to many other fiscal, police, and other laws and regulations, for the mere violation of which, irrespective of the motives or knowledge of the party, certain penalties are enacted; for the law in these cases seems to bind the parties to know the facts and to obey the law at his peril. The salutary rule that every man is conclusively presumed to know the law, is sometimes productive of hardship in particular cases. And the hardship is no greater where the law imposes a duty to ascertain a fact.

THERE has been quite an uneasy feeling among the masters and officers of the large tow barges relative to the provisions of the act of Congress requiring inspection of hulls of sail vessels and barges and licensing the masters and chief mates of such vessels. There seemed to be no official or positive knowledge on this subject and even an inquiry from a prominent local inspector of hulls a few days ago seemed to leave the matter in doubt, certainly from the wording of the act, lake tow barges seemed to be classed in the category for inspection and examination of officers. The situation being such, we said in the RECORD last week as follows:

It is now about time that the Hon. Commissioner of Navigation, or the Supervising Inspector General of Steamboats issued a notice regarding the licensing of masters having charge of vessels of 700 tons and upwards. If this departure is to be sprung on lake tonnage, it is but the duty of the heads of departments to give fair and timely warning, so that the officers at present in charge of this class of tonnage may be duly prepared to take up the examination required under the statute. There is one feature that ought to be kept strictly in view, as follows: Vessels built, equipped and manned, as and for tow barges, cannot be considered as sailing vessels, such craft are always under the convoy of their towing steamer and are not intended to take care of themselves, hence it may be argued that licensed men are not required in their handling, per se., the late legislation would not apply to vessels always in tow.

We have since received the following communication:

TREASURY DEPARTMENT,
STEAMBOAT INSPECTION SERVICE,
OFFICE OF THE SUPERVISING INSPECTOR GENERAL,
WASHINGTON, D. C., June 10, 1899.

To the Editor of The Marine Record:

Referring to matter contained in enclosed slip, above quotation, (from the MARINE RECORD) I would respectfully refer you to your own columns, page 12, edition of February 23d. 1899, for evidence to show that, your suggestion that the law in regard to the inspection of sail vessels over 700 tons and the licensing of the officers thereof, which law takes effect July 1st, 1899, is not "to be sprung on lake tonnage," unless a widely circulated notice sent out, nearly five months before the law goes into effect should be construed as a lack of due notice thereof.

Further, this office has construed the law referred to, as not applying to tow barges, though furnished with sail for auxiliary purposes. Very respectfully,

JAS. A. DUMONT,
Supervising Inspector General.

This assurance from the chief of the Steamboat Inspection Service will be read with a degree of relief by those interested, as, up to the late opening of navigation, or within a few weeks from the present date, some of the masters and mates were quite exercised regarding the supposed new rules and spent their spare time studying up so as to be found proficient to hold a license. The article contained in our issue of February 23rd, was considered far from being explicit and conclusive relative to the application of the law so far as lake tonnage was concerned.

HISTORY records the Irish mate as being a demon at decimals, as for instance, when he hailed the hold to learn how many men were down there, the reply was, "three, sir," then he said, "Let half of yees come on deck immajately." Apropos, to the recent decision of the Treasury Department contained in the current issue of the RECORD, the Commissioner of Navigation, Hon. E. T. Chamberlain, is asked by the Collector of Customs of Wiscasset, Me., how to compute the net tonnage of a vessel of 30.29 gross tons having a deduction of 19.33 tons. The Commissioner of Navigation, with a charming frankness, irregardless of the law on the subject, so far as it appears to us, informs the Collector that he should deduct 19.33 from 30.29 tons so as to obtain a net tonnage of 10 tons, and that other analogous cases should be disposed of in a similar manner. It is only recently that a law was enacted cancelling fractional parts of a ton in a ship's measurement. As the difference in fractions in the above measurements only amounts to 4-100 of a ton, it is positively a case of deducting 19 tons from 30 tons, and in the operation the Hon. E. T. Chamberlain desires the result to show 10 tons. Here is an instance where 96-100 of a ton is thrown overboard and Collectors of Customs instructed to perpetuate the inaccuracy. On the passage of the law removing fractions from a vessel's tonnage or measurement, the RECORD suggested that fractions under half tons might be discarded, or dispensed with, and a ton added to the whole number where the fractional measurement exceeded 50-100 of a ton. By this means it was thought the general results would be evened up, but to throw a ton off the register of a vessel for the sake of cancelling 4-100 is drawing the line to a ridiculous inexactitude, therefore, we would like to see the Commissioner fixing this rule up a little more in consonance with ordinary judgment if not common sense. The perpetration and continuance of these erroneous tonnage measurements will go far to make a muddle of, if not a burlesque of the national tonnage statistics. There are over 22,705 vessels now documented by the Treasury Department and ranging from 5 tons upwards, showing a mean tonnage for all craft of over 209 tons, so that if 96-100 of a ton is defunct in a majority of the merchant vessels, the figures given for June 30, 1898, are erroneous to that extent. Let us repeat the simple proposition of taking 19 from 30 and leaving 10 as a remainder, or to be eminently exact, as the RECORD invariably endeavors to be, 19.33 tons from 30.29 tons and leave a net 10 tons, easy figuring, isn't it? There's a whole fund of fun in figuring so finely on the measurements of shipping so as to obtain a reliable and official record of the aggregate tonnage contained in the United States mercantile marine.

MR. H. J. COX, forecast official of the Weather Bureau at Chicago, recently submitted a more or less valuable (?) paper to the weather officials, in convention assembled. Mr. Cox no doubt said some things that are true, nothing that was new and true, while in one instance at least, he told us something new—that is not true, and all this in a very brief paper, say curtailed to an opening paragraph, which was also the closing one. We quote:

"Along the south shores of Lakes Superior and Erie and at the southern ends of Lakes Michigan and Huron a northly wind of 35 miles after four or five hours duration prohibits navigation, while a 45 or 50 mile wind from the south causes no interference whatever. During the southerly gales of September 21, 1893, when the wind attained a velocity of 60 miles per hour at Marquette, Mich., shipping along southern Superior suffered no inconvenience, although a 25-mile wind from the north after a few hours often stirs up such a sea as to force vessels like the Northwest and Northland to seek shelter in some one of Lake Superior's harbors. In fact, it is probably the effect of the sea rather than the direct effect of the wind itself which causes so much trouble. A captain can proceed along the leeward shore in absolute safety, when it would often be impossible for him to make any headway on the opposite side of the lake."

It is in the last sentence in particular that Mr. Cox jumbles his words beyond the power of comprehension. It is the other side of the lake that the captain should proceed on, notwithstanding Mr. Cox advises that it would be often impossible for him to make any headway. Mr. Cox might take a canoe or skiff ride on the lake front at Chicago when there was something fresh promised from the north. He would no doubt be able to guess from the Washington daily report, his telegraphic advices, and the general local weather conditions, at what time he could venture on the probable successful experiment involved "in proceeding along the leeward shore in absolute safety." This weather sharp (we had almost said shark,) and positive lubber, would no doubt find his position easier if he would only be convinced that he should do as others invariably try to do, that is, hug a weather-shore in preference to the leeward one. Of course, Mr. Cox really meant the weather shore, only, he couldn't express himself. A leaky ship, or a lee shore, is worse than a scolding wife, Mr. Cox.

THAT Chicago ordinance which requires every vessel of 200 feet in length and over, to be accompanied by a tug when moving in the river, is a public proclamation by the municipality, that the port is an unsafe one for modern tonnage. The next step in order is to fill in certain portions of the creek and thus abolish the bridge nuisance. This can be done by offering increased facilities on the Calumet at South Chicago, and would no doubt be in consonance with the views of a majority of interests in Chicago, Evidently, Chicago creek has, in a measure, outgrown its lake trade, or is it vice versa?

THE Weather Bureau marine agent and local forecast official at Detroit, is a splendid champion of the interests and importance of the lakes ; for that matter, he wouldn't be a Conger if he wasn't a discreet aggressor. At a recent convention of the Weather Bureau Officials, held at Omaha, Neb., Mr. N. B. Conger read a paper on the maritime interests of the lakes, from which we take the following excerpts : "For your information it may be stated that more tonnage passes the port of Detroit annually than the combined tonnage of our Atlantic, Pacific and Gulf coasts. There are passenger steamers plying on these waters finer in their equipment than any ocean steamer afloat at the present time." This is a glorious send off, and Mr. Conger knows whereof he speaks. Let's see, though, that tonnage part of it, passing Detroit, greater than the entire coast tonnage, here a little elucidation seems necessary. On June 30, 1898, the merchant marine of the United States, including all kinds of documented shipping (and everything down to five tons is documented) comprised 22,705 vessels of 4,749,738 gross tons, the coast vessels numbering 18,173 of 3,086,808 gross tons and the lakes 3,256 vessels of 1,437,500 tons gross. Now, our Weather Bureau official evidently intended to keep the three million tons of Atlantic, Gulf and Pacific coast tonnage tied up, so as to permit the 1½ million tons of lake bottoms to shoot past Detroit about twenty times during the course of the season. Then again, with all the pride of location permissable, there are elegant passenger steamers on the lakes, but we can't build up our prestige at the expense of stretching the long bow and otherwise decrying superior tonnage. Let us hope that the weather man has never sighted the saloons of the modern Atlantic liners, thus may we let him out easy. Another excerpt : "It may be well stated that during the busy season of the year an average of 100 vessels pass Detroit every 24 hours, or one every 14 minutes ; for 12 hours there had been recorded 84 passages, and for one hour a maximum number of 57, making the average nearly one every minute." Here is an official and well authenticated basis for computing the immense volume of commerce passing a given point, and, incidentally, the mercantile marine supremacy of the City of the Straits (Detroit). More power to your statistical elbow and digits, Mr. Conger, give it 'em straight.

At a time when there was a slight friction between the United States and the Dominion government regarding tolls on the Welland canal, the president placed a toll on all Canadian tonnage using the St. Mary's Falls canal, Michigan, and, as there was no other means of ingress or egress, the Dominion Lake Superior traffic was compelled to "ante up" and pay for using the American lock. The Dominion government at once proceeded to build a commodious lock on their own side of the St. Mary's Falls, and at a later date the embargo was raised on the American side. As a result of the Canadian lock being in operation, we find that forty-two craft, having a registered tonnage of 10,230 tons, locked through the Canadian canal in April of this year, while the U. S. canal was not used. Evidently, putting the screws on Canadian tonnage at that time resulted advantageously to our own commerce in April last, though it does smack of returning good for evil on the part of the Dominion government, as in this instance they had a brief chance to get back at us. In any case, it showed a magnanimous spirit of conciliation in the matters affecting the joint commerce of the lakes, and as such, the Dominion government is entitled to a fair and liberal appreciation of their condescension in this traffic of last April, as well as for their kindly and generous ruling in permitting the large new revenue cutters Gresham, Algonquin and Onondago, (which were after all destined for naval service,) to pass through the Welland and St. Lawrence system of canals, in their attempt to reach the coast in time to be of national service in our late brush with Spain, notwithstanding their very passage might have been construed as being tainted with an Alabama odor, the pungency of which the Dominion or Imperial governments may yet have to inhale.

ON account of the recent stranding of the Mohegan and later of the Paris, quite a furore has been created throughout the maritime community and interests relative to the possible magnetic attraction in the vicinity of the Lizard on the south coast of England. In this connection, we find it within our province to state that the same uneasiness exists regarding the coast line of the north shore of Lake Superior and especially from Two Harbors west. A majority of lake masters and pilots assert that the compass needles are deflected on that shore line, and, as three fine, large steamers stranded there last winter, the legend seems to contain at least a shadow of substance. The question arises, who have we to investigate the evidence offered and determine by practical tests and accurate observations the amount and direction of local attraction, if any, in that vicinity? Among the several departments of the Federal Government, detailed for lake service, is, first, a representation of the Navy, also the Corps of Engineers, the Revenue Marine Service, Light-House Department tenders, as well as the officials of the several branch hydrographic offices. Which, among these departments, is to "bell the cat" and by an indisputable series of observations, tell the practical marine community something about the magnetic attraction and compass-deflecting properties of the north-west shore of Lake Superior. A more combined representation of interests, coupled with an earnest and urgent request to the Navy Department, would no doubt result in having qualified observers sent in quest of the at present unknown yet apparent presence of that demoniacal enemy to lake pilots, ycleped, "Mr. Local Attraction."

LAKE FREIGHTS.

The feature of the week has been a compromise on the freight rates for carrying bituminous coal. As we stated last week, shippers and vessel owners were 10 cents apart, and for the time, interests agreed to disagree. Now the difference has been split to 35 cents to the head of Lake Superior and 45 cents Lake Michigan, all leading ports, dispatch guaranteed, free over the rails in and out and net tons counted. Better rates are paid to minor ports or where a vessel has to change ports to load. Portage and Fort William 40 cents, with every indication that the next 5 cent raise is near at hand, nor is there any reason why coal cargoes should not pay their proper cost of transportation, if a fair rate of freight was made and maintained. No shipper can afford to let his competitor land coal at the same port at a cost of say 10 cents per ton less than he had paid. Consequently, the rivalry is more between the shippers themselves, than with the vessel agents, owners or brokers. While Ohio shippers were holding off at the advance, Buffalo shippers did some brisk chartering at 50 cents and pulled up the supply of hard coal in the West.

Chicago grain rates fluctuated ⅛ of a cent on corn through the week, but is now back to 2 cents, with brisk chartering and more tonnage asked for.

Iron ore rates are steady at last week's quotations. Escanaba, Marquette, Duluth, 70 cents, 75 cents and 80 cents respectively, 80 cents being paid Escanaba to Tonawanda. Chartering has been fairly active all week. As an indication of how the iron ore is being piled down to Lake Erie, the lateness of the opening of the season may be considered, and from this standpoint it is found that the shipments to June 1 nearly balances last seasons. Last year half a million tons was transported in April against comparatively nothing this season. The shipments to the first of June then were 2,334,039 tons, and this year's figures are 2,120,167 tons, a falling off of but 213,972 tons. Iron ore is king, and too much can neither be mined nor shipped. Rates ought to go up for tonnage that has not been chartered ahead, and while the ore market is firm, coal and grain must follow suit to the limit of the difference between lake and canal, and all rail.

A FINE REMITTED.

A dispatch from Washington says : Acting Secretary Spaulding has remitted the fine of $500 levied upon Capt. B. Boutell for running the tug Boscobel, of Port Huron, one trip after her license had expired. A strong protest against the fine levied was made by Capt. Boutell, who filed an affidavit in which he said :

"On April 27, 1899, our company wired to the local inspector of hulls and boilers of this district that we wished the Boscobel inspected immediately. We had, at the time of this wiring, chartered two vessels to load lumber at Cheboygan, and had no other tug in commission except the Boscobel. We waited for the inspectors until the following Saturday night, when, they not appearing, we were compelled to, and did send the Boscobel to Cheyboygan with the two vessels, although at the time the certificate of her inspection had expired. We immediately brought the Boscobel back to Bay City for the purpose of inspection and had the same done. I regret very much having been compelled to run the boat without proper inspection, but the situation was one that demanded it in order to save our obligations to other people. We also knew that the boat was in perfect condition."

Because of the fact that the inspection showed the tug to be in first-class condition, Gen. Spaulding decided to remit the fine.

LAKE CARRIERS' MEETING.

The Lake Carriers' Association is evidently of the opinion that contractor Connors, of Buffalo, ought to defray the costs of the salary of the superintendent, the services of whom action of his made necessary. This was determined at a meeting of the executive committee held on Tuesday afternoon in the office of James Corrigan. The meeting was called primarily for the purpose of considering some way of paying the salary of Superindent Dunavin, who was appointed by Bishop Quigley according to the terms of the arbitration agreement at the close of the strike of the Buffalo grain handlers. There was a discussion covering a couple of hours in which the matter was gone over pretty thoroughly. At the end it was seen that there was little chance for arranging any equitable way of the association paying that salary, and so judged that it was the duty of Mr. Connors to meet the expenses.

The first proposition was to assess the salary of the superintendent on the grain and make that stand the bill. They saw, however, that this would not do, as the grain had nothing to do with the appointment of the man. Then they thought that it might be that the vesselmen, in consenting to his appointment, made themselves liable for the bill. This was also found to have loop holes in it. It was a violation of a contract with the vessel men that caused the appointment, and, therefore, the owners ought not to be held responsible, especially after they had lost so much by the long drawn-out delay. This brought the deliberations down to the root of the matter, as they thought, and the decision was reached that as Mr. Connors evidently was the chief figure in the strike he ought to pay the extra superintendent's salary and expenses. This sentiment gained ground as the meeting progressed and it was finally almost the unanimous opinion that Mr. Connors ought to settle. They say that if he had lived squarely to the contract there would have been no strike, and, therefore, he was responsible for the strike and the necessity of appointing a superintendent. Secretary Keep was appointed a committee from the association to secure Mr. Conner's promise to pay the bill.

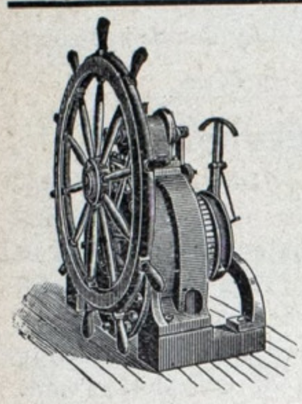
Furthermore, a resolution was adopted advancing the rate of unloading grain at Buffalo 3 cents per 1,000 bushels. The advance will make the charge to vessels $3.13 cents per 1,000 bushels. It was expected that W. J. Connors, the Buffalo contractor, would attend the meeting, but he was unable to be present on account of the labor troubles on the docks at Buffalo. The advance in the discharging rates was made to pay the expenses incurred by the association in connection with the grain bill of lading, the grain scoopers' strike and the expenses of the committee visiting Buffalo in order to bring the strike to a close. The extra charge will also be used in part to pay Inspector Donovan, who was appointed to look after the interest of the grain scoopers at Buffalo.

Vesselmen who have not made application for membership will have to do so before July 15, as it was decided not to enter any boats in the association after that date. A list of the vessels that are not in the association will be furnished the private light keepers. The expense for maintaining private lights will be heavier this year than it has been for some time and an effort will be made to have owners of boats that are not members of the association and who get the benefit of the lights pay a portion of the expense. The shipping masters will be furnished with a list of the vessels that are in the association and they will be instructed not to furnish other boats with crews.

Owing to inertia somewhere, and probably with the Light-House Board, gas buoys destined for the St. Mary's river are still kept at the supply depot in Detroit and this necessitates an extra outlay to defray the cost of private lights in that vicinity.

THE steamer Juliet, which was purchased by the Drainage Canal Board, arrived at Chicago, Sunday from James Davidson's shipyard, West Bay City, where she had undergone a thorough overhauling.

Queen City Patent Hydraulic Steerer.



The best and most reliable.

Generates no heat in pilot house.

Has large hand wheel.

Can be changed from power to hand steering instantly.

A favorite with pilots.

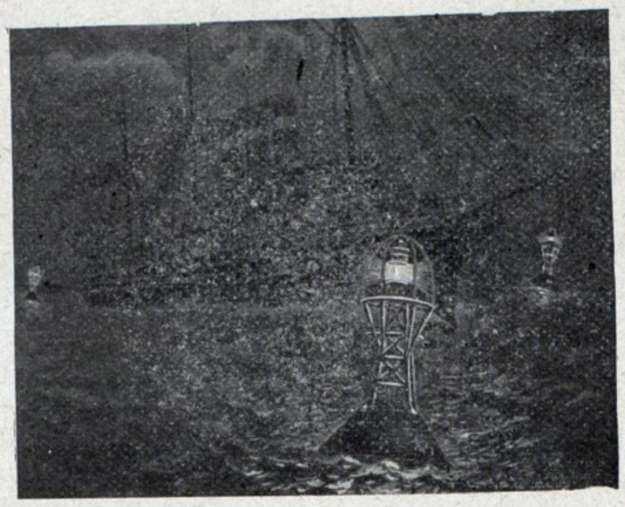
Send for References.

Queen City Engineering Co.

BUFFALO, N. Y.

Pintsch Gas Lighted Buoys.

Adopted by the English, German, French, Russian, Italian, and United States Light-House Departments for channel and harbor lighting. Over 800 gas buoys and gas beacons in service.



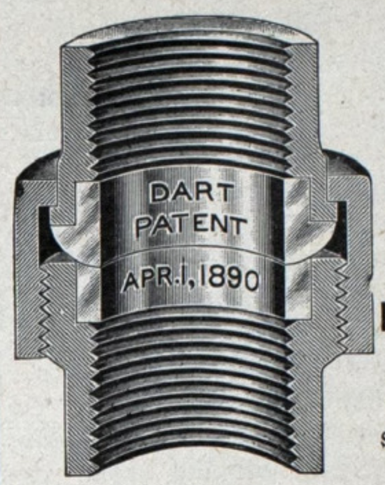
Burn Continuously

from 80 to 365 days and nights without attention, and can be seen a distance of six miles.

Controlled by

THE SAFETY CAR HEATING AND LIGHTING CO.

160 Broadway, New York City.



The Best Union

Made in the U. S.

Mnf'd by the

E. M. Dart Mfg. Co.

Providence, R. I.

Send for circulars and prices.

Almy's Patent Sectional WATER TUBE BOILERS.

NOW USED IN

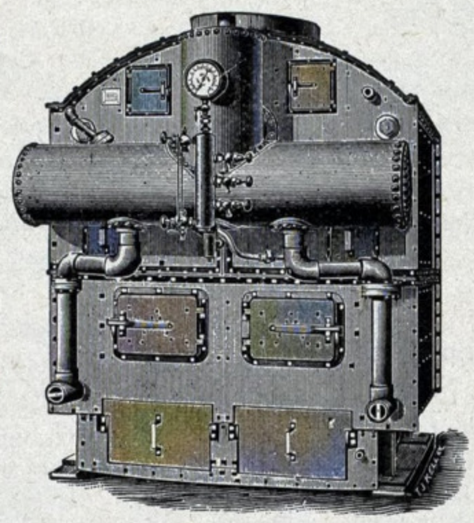
21 Passenger Boats from 70 to 160 ft. long.
61 Steam Yachts from 50 to 180 ft. long.

U. S. TORPEDO BOAT "STILETTO."

Numerous freight and fishing steamers, launches and stationary boilers are giving most excellent results.

ALMY WATER TUBE BOILER CO.,

178-184 Allens Ave., near Rhodes St., PROVIDENCE, R. I.



W. A. McGILLIS & CO.

DREDGING.

57 WADE BUILDING. CLEVELAND, OHIO.

DEWEY'S SOLILOQUY.

To go or not to go. That is the question.
Whether 'tis better to keep the old ship hitched
Fast to the bottom of Manila Bay,
Where I can lay me down and peacefully snooze
Rocked in the easy cradle of the deep,
Or homeward hie, where all the people vow
That not a thinglet will they do to me!
A chill of direst apprehension starts
Up in my scalp and shimmers to my toes,
And then collects itself and wiggles back
Along my limbs and spinal column till
The latter, erstwhile as the strongest steel,
Becomes but a piece of rubber hose
When I reflect that in the old home land,
Which I so thoughtless chose as place of birth,
The whole darned push is laying for me, bent
On showing me how great a man I be!

* * * * * * *

Methinks I'll anchor off the coast of Maine
And swim ashore when darkness palls the deep,
And hit the trail incog. for old Vermont,
And hide myself within my boyhood shack
And turn the automatic bulldog loose
To warn the masses I am not at home
To anybody till this wild attack
Of temporary jim-jams of the brain
Has spent itself, and I am not compelled
To rob our good old Independence day
Of vested rights it's held since Freedom's birth.

—From the Denver Sunday Post.

BUFFALO COAL FREIGHTS AND SHIPMENTS.

There is a fair amount of activity in lake shipments with shippers disposed to pay the decidedly high rates that now prevail. Tonnage is not very plenty, though it is not able to dictate the use of the demurrage bill of lading. Last week the steamer Colonial tried to force it on the shippers, and refused a charter unless it was used, but when it was found she would have to go out without a cargo she came down and took it on the old bill.

Lake shipments to the end of May make a good showing, being 327,418 tons, against 344,827 tons to date last season. It is likely that the shipments this month will carry the total past last season. Shippers say that there will be more shipped this season than last, but they are sure that anthracite will not contribute its share to the million tons extra that is said to be needed on the lakes this year.

The total amount shipped last week was 76,579 tons, distributed as follows: Chicago, 40,350; Milwaukee, 15,500 Duluth-Superior, 11,900 tons; Ashland, 2,400 tons; Waukegan, 1,400 tons; Kenosha, 1,200 tons; Depot Harbor, 1,179 tons; Racine, 1,050 tons; Gladstone, 1,000 tons; Saginaw, 600 tons.

Freight rates as follows:

Chicago, 50c; Duluth-Superior, 40c; Milwaukee, 50c; Ashland, 40c; Kenosha, 60c; Racine, 60c; Depot Harbor, contract; Waukegan, 60c; Gladstone, 40c; Saginaw, 40c.

The features of the shipments just now are that Toledo has dropped off and there is a deadlock on Waukegan. Vessel owners, and agents do not exactly like the handling facilities at the new port and tried to get more freight. Not getting it, they sent their tonnage elsewhere.

The supply of soft coal has ceased to be in excess and business is good. The increase of dock fueling since the strike ended has brought matters down to the normal again. Higher prices are predicted soon.—The Black Diamond.

CLEVELAND HARBOR BIDS.

Abstract of proposals for dredging in Cleveland harbor, O., received and opened by Col. Jared A. Smith, Corps of Engineers, U. S. A., at Cleveland, O., on Friday, June 9, 1899, at 2 o'clock p. m., standard time, in accordance with advertisement dated May 9, 1899.

Amount available for payments under the proposed contract is $70,000 of appropriation for improving harbor at Cleveland, O., River and Harbor Act of March 3, 1899.

Names and addresses of bidders and price bid per cu. yd.:

The Buffalo Dredging Co., Buffalo, New York	$0.145
James Rooney, Toledo, O	.1275
The L. P. & J. A. Smith Co., Cleveland, O	.12875
W. A McGillis & Co., Cleveland, O	.1195
Carkin, Stickney & Cram, Detroit, Mich	.16
G. H. Breyman & Bro., Toledo, O	.13

The firm of W. A. McGillis & Co., Wade Building, Cleveland, being the lowest responsible bidders, their proposals will no doubt be recommended to the Chief Engineer, Corps of Engineers, U. S. A., for acceptance.

KNOWS WHEN TO QUIT.

Capt. William G. Randle, master of the American Line steamship St. Louis, and commodore of the companys' fleet, has resigned to accept a prominent position with the New York Ship Building Co., of which Henry G. Morse is president. He tendered his resignation to President Clement A. Griscom before sailing from New York on his last voyage.

It is reported that the mental strain which Capt. Watkins, of the wrecked steamer Paris, of the American Line, has been laboring under, since his vessel went ashore, has impaired his health to such an extent that it will take months of recuperation before he will be again fit for work.

Evidently Capt. Randle knows when to quit sailing, as after all is said and done, it is only a question of time, until these Atlantic liners and "greyhounds" get into more or less trouble.

Fortunately, in the majority of instances, minor casualties only are met with, and while annoying, to the point of anxiety, seldom amount to the seriousness of loss of lives and property, with an exceptional total loss. Capt. Randle is to be congratulated on his new, and we hope lucrative appointment on shore.

A NEW and expeditious method for driving piles is described in the instructions as to technical works for the Russian Engineer Corps. On two sides of the pile to be driven are made longitudinal grooves of sufficient width and depth to receive ordinary iron gas pipes of 1 inch or 1½ inches diameter, terminating in nozzles like those of hose pipes, and turned towards the point of the pile, being fixed to it by light staples, while the upper ends are connected by gutta-percha pipes with a force pump capable of injecting water under a pressure of five atmospheres—71 lb. per square inch. It is said that the outflow of this water at the point of the pile causes the latter to sink three or four times more quickly than it would under the action of a pile-driver. A few blows, however, given by the monkey when the pile has attained the desired depth, in order to secure the necessary consolidation, and the gas pipes are then drawn out in order to serve for driving another pile.—Engineer's Gazette, London—Sunderland.

Collision—Tug and Barge in Tow—Following Vessel.—A tug which was following another tug with two barges in tow on a parallel course, and about abreast of the tows, slowed and sheered to the starboard, and, in attempting to pass under the stern of the last barge and into a position on the other side, came into collision with the barge and injured her. Held, that the tug, being the burdened vessel, under duty to keep out of the way, was presumptively in fault; and a claim that the barge, which carried some sail, sheered suddenly from her course, causing the collision, must be well supported by evidence to exonerate the tug. The Mars, 93 Fed. Rep. (U. S.) 505.

FLOTSAM, JETSAM AND LAGAN.

The Mining Journal Co., Marquette, Mich., has issued a volume entitled "The First Annual Review of the Lake Superior Copper Industry." It is now being mailed at the cost of fifty cents.

The foreign mail service at New York involves the handling of many millions of separate pieces in an incredibly short time. How it is done is described by an expert in the July Scribner's.

The wooden steamer Tampa, which was damaged by stranding at Baptism river, on the north shore of Lake Superior last November, will be given temporary repairs at West Superior so that she may be towed to Bay City, wh re she will be given permanent repairs.

The large steel tow barge John Smeaton, built by the Superior Ship Building Co., Superior, Wis., to the order of the Bessemer Steamship Co., Cleveland, will be launched on Saturday, June 17. Material for two more new contracts is expected to be delivered promptly at the shipyard.

One of the Philadelphia morning papers, which formerly gave close attention to marine news, informed its readers on one occasion that the bark Betsy Jane had arrived at Honolulu "with an oil-well on board." Investigation proved that there was nothing in the report except "all well on board."

N. J. Gaylord, a contractor of Ludington, Mich., is placing propelling machinery in a somewhat novel craft of his own design and construction. It is a scow 72 feet long, 24 feet beam and 8 feet deep. This craft is designed to serve the purpose of a scow, tug, piledriver, wrecker and general utility boat. It is as a wrecker that she will be most used, however. She will be equipped with a powerful hoisting apparatus, and can be used in almost any kind of work that she is found best fitted for.

The master of the Canadian steamer Arabian entered at Duluth this week from Fort William without having a bill of health and a fine was imposed on the vessel by Collector Willcuts. The steamer may be fined for any sum between $10 and $5,000 in the discretion of the secretary of the treasury. All vessels entering an American port on the lakes must show a clean bill of health if they hail from a Canadian port. This is the time the master of the Arabian was caught napping.

When national or naval tonnage is equipped, hands shipped and the vessel ready for a cruise she is usually placed in commission. When a lake tug, lumber droger, or any sort of indiscriminate tonnage is ready to load cargo, she is also said to be ready to go into commission. Much in the same way is Admiral George Dewey, U. S. N., a sailor or nothing, so also is a deck hand on a cargo-droging tow barge. There are degrees of proficiency in all callings, so is there an eternal fitness in the use of nautical phraseology.

The engineer-in-chief of the revenue cutter service at Washington is getting out designs for the boiler and machinery to be placed on a new cutter for the lakes. Plans for the machinery, hull and engine are under way and will be completed about September 1. While the cutter will not be quite as speedy nor as large as the Gresham, Onondago and Algonquin, she will in all respects be a first-class vessel. The general dimensions will be 180 feet in length, 27 feet beam, and 10 feet draft, with a speed of from 14 to 15 knots, which is about two and a half knots less than the speed of the Gresham and Algonquin. The vessel will be propelled by one vertical triple expansion engine of 1,200 horse-power and fitted with two boilers. Work is being pushed on the plans for the new cutter, but it is not believed that she can be placed in commission before late next year.

A dispatch received at Michigan City from Indianapolis says that the state officials will appeal to the authorities of all Wisconsin and Michigan lake-port towns to co-operate in legal proceedings to prevent the pumping of water from Lake Michigan through the Chicago drainage canal. An Indiana expert says the drain on the lake must in a short time lower the level of the water materially, and this in turn, must affect the commerce and prosperity of many cities, which at present are in a thriving condition. The lowering of the water only a few inches, it is claimed, will practically ruin the harbor at St. Joseph and Benton Harbor and work material injury to the Michigan City Harbor and ports along the Wisconsin shore. The Niagara power canal as well as the "Soo" power canal also calls for adequate investigation as to their probable effect on lake levels.

The steamer R. G. Stewart, Hancock, for Duluth, Captain Flynn, was burned last week. There were but three passengers aboard the Stewart. George McKenna, of Detroit, the wheelsman, who was drowned, jumped from the lifeboat from the steamer's deck and capsized it. The remains were recovered and buried on Michigan island. The Stewart was a small steamer plying between Duluth and Portage Lake. She encountered a heavy fog, and in entering Chequamagon bay to go to Ashland she got far out of her course and ran ashore on Michigan island, bringing up a mile east of ths lighthouse. While awaiting the arrival of a tug from Ashland fire broke out, and before the hose was in working order the little craft was in flames. The dry and oil-soaked wood around the engines and boilers burned like tinder, and the signal was given to abandon the steamer. Nothing was saved. The boat was owned by C. O. Flynn, of Duluth, and insured for $6,000.

Charter Party.—A schooner was chartered at the port of New York "for as many voyages as vessel (could) make from Fernandina to New York" between November 8, 1897, and June 30, 1898. This period was ordinarily sufficient for five trips, including discharges, which were an important factor. The vessel was to "receive on board during the aforesaid voyage, the merchandise hereinafter mentioned." The charter engaged to furnish a cargo of ties each trip, and to pay for "the use of said vessel during the voyage aforesaid, fifteen cents for each * * * tie delivered, * * * payable in cash on proper delivery of cargo at port of discharge," and also agreed "to pay vessel's wharfage, if any (should be) incurred while discharging under this charter." It was agreed that "the lay days for loading and discharging (should) be as follows * * * commencing from the time the vessel is ready to receive or discharge cargo, at least 75,000 feet per running day * * * to be furnished the vessel for loading, and customary dispatch for discharging at port of discharge," and that a certain sum should be paid per day for detention by fault of the charterer. On one trip, at the charterer's instance, the vessel went up the river to Bush's Bluff, though it involved a delay. Held, that the term "voyage" included the discharge of the cargo, and therefore the vessel was not bound to undertake a fifth trip, where she could not have completed it and have discharged her cargo by June 30. The Mary Adelaide Randall, 93 Fed. Rep. (U. S.) 222.

HE KNEW.

"Hov yez heard about ut?" queried Shannigan, with well-simulated indignation. "Dhe aut'orities wudn't let 'em bury a poor owld woman yisterday!"

"Wudn't let 'em bury her?" ejaculated McLubberty. "An' for phwoy not, oi dun'no'?"

"She wasn't dead! Thot's wan on yez, Mack!"

"Niver moind! Niver moind! Oi'll work ut aph on sawmbody ilse."

Meeting O'Hoggarty a little later, he remarked, "Ut's savages thot rule us, d'yez moind?"

"Oi'm not married mesilf," replied O'Hoggarty calmly.

"Oi don't mane thot. Begorra, dhey wudn't let 'em bury a poor owld dead woman yisterday!"

"Phwoy not?"

"B'cause she wasn't dead. Haw! haw!"

"Wasn't dead? Dhe divil! Yez just said she was dead."

"Av oi did, oi got ahead av myself. Ut's a joke, d'yez see? Oi am a wag. D'yez know phwot a wag is?"

"Yis!"

"Phwot, thin?"

"A wag is a dom fool!"—Harper's Bazar.

"Yachting Wrinkles," by Capt. A. J. Kenealy, is a book that ought to be seasonable this year, and, coming from a man who has enjoyed a wide acquaintance among yachtsmen as well as a lengthy period at sea in the merchant service before he became a newspaper man and devoted his energies to te ling the public things they ought to know, much is naturally expected of it. The book takes the standpoint in general of advising the amateur. There is a good deal of history in the volume and it is copiously illustrated with cuts and diagrams and pictures of famous yachts. The book is an interesting addition to a yachting library, and is published by the Outing Co., 239 Fifth avenue, New York, who produce lots of good things.

Lien of Charterer for Damages caused by Unseaworthiness—Lease or Demise of Vessel.—If a vessel be let to a carrier for a voyage, or for a day, or other time, at an agreed price per day, with a warranty of seaworthiness, and with a stipulation that the hirer shall provide crew and everything for the purpose of her navigation, and if by her unseaworthiness a cargo received by the carrier for transportation is injured, and the damage is discharged by the carrier, he has a lien on the vessel for the amount of such damages, and may recover the same in an action in rem against the ship. The New York, 93 Fed. Rep. (U. S.) 495.

Maritime Liens—Effect of Provisions of Charter Party—Subrogation of Charterer to Lien of Cargo Owner.—Where a charter party amounts to a demise or lease of the vessel, the owner surrendering to the charterer the entire possession and control, the latter takes the place of the owner, and becomes responsible as such to shippers for damages for injuries to the cargo, though the vessel remains liable therefor; and where, in discharge of his personal liability, he pays such damages, and they resulted from the fault of the ship—as from her unseaworthiness—he is subrogated to the lien of the cargo owner therefor, his relations to the ship as to such damages being that of surety. The New York, 73 Fed Rep. (U. S.) 495.

TOBIN BRONZE

(Trade-Mark Registered.)

Tensile strength of plates one-quarter inch thick, upward of 78,000 lbs. per square inch. Torsional strength equal to the best machinery steel. Non-corrosive in sea water. Can be forged at cherry red heat. Round, Square and Hexagon Bars for Bolt Forgings, Pump Piston Rods, Yacht Shaftings, etc. Rolled Sheets and Plates for Pump Linings and Condenser Tube Sheets, Centerboards, Fin Keels and Rudders.

The Ansonia Brass & Copper Co.

SOLE MANUFACTURERS,

Send for Pamphlet. 99 John St., NEW YORK.

S. F. HODGE & CO.

MARINE ENGINES,
PROPELLER WHEELS,
DECK HOISTERS,
MARINE REPAIRS.
312 ATWATER STREET,
DETROIT, MICH.

Chas. E. & W. F. Peck,

58 William Street, New York City. Royal Insurance Building, Chicago, Ill.

C. T. BOWRING & CO.

5 and 6 Billiter Avenue, E. C., - London, England.

Insurance

BROWN & CO., - - - 202 Main Street, Buffalo, N. Y.
PARKER & MILLEN, 15 Atwater Street, W., Detroit, Mich.
J. G. KEITH & CO., - 138 Rialto Building, Chicago, Ill.
LA SALLE & CO., Board of Trade Building, Duluth, Minn.

Are prepared to make rates on all classes of Marine Insurance on the Great Lakes, both CARGOES AND HULLS.

INCORPORATED 1794.

Insurance Company of North America

CAPITAL, Paid up in Cash, - - - - -	$3,000,000.00
ASSETS, - - - - - - - -	10,173,488.90

CHARLES PLATT, President.
GREVILLE E. FRYER, Sec'y and Treas.
T. HOUARD WRIGHT, Marine Secretary.

EUGENE L. ELLISON, Vice President.
BENJAMIN RUSH, Second Vice President.
JOHN H. ATWOOD, Assistant Secretary.

Lake Marine Department, GEORGE L. McCURDY, MANAGER. CHICAGO, ILL.

A. J. MORSE & SON.

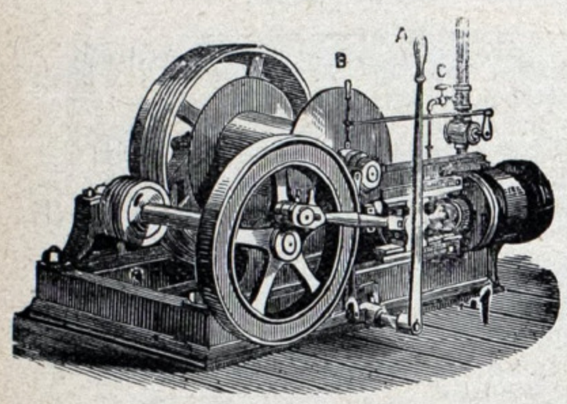
DIVING APPARATUS

140 CONGRESS ST. BOSTON.

WILLIAMSON BROS.

COR. RICHMOND AND YORK STS.,

Philadelphia, Pa.



HOISTING and SHIP ENGINES
STEERING ENGINES.

With either Fractional, Spur or Worm Gear of Various Patterns to Suit all Purposes.

M. A. HANNA & Co.

COAL, IRON ORE AND PIG IRON.

Steamboat Fuel at Ashtabula.

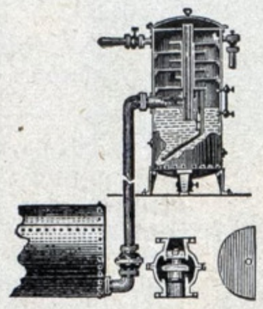
Large Supplies of Best Quality.

Fuel scow with elevators and discharging spouts. Storage of 650 tons. Discharges 150 tons an hour into steamers while unloading cargo.

LIGHTER carrying different grades at all times.

MINERS AND SHIPPERS.

MAIN OFFICE, Perry-Payne Bldg., Cleveland, O.



Buffalo Feed Water Heater

AND PURIFIER.

Made in all Sizes and to Suit all Conditions.

Send for Catalogue.

ROBERT LEARMONTH,
200 Bouck Ave., BUFFALO, N. Y.

PICKANDS, MATHER & Co.

PIG IRON.
IRON ORE AND COAL.

FUEL LIGHTERS AT BUFFALO, ERIE, ASHTABULA, AND CLEVELAND.

At DETOUR, MICH., A FUEL DOCK equipped with Shute capacity of 600 Tons.
Best Quality PITTSBURGH COAL furnished at any time during Day or Night.

WESTERN RESERVE BUILDING, CLEVELAND, O.

Moore's Anti-Friction Differential Chain HOIST

Adjustable Automatic Brake.
Self-sustaining at every point
Highest Efficiency.
A New Movement.
A Perpetual Compound Lever
Powerful, Simple and Durable
Light, Compact and Strong.

11 SIZES.

Half-Ton to 15 Ton Capacity.

Compressed Air Motor Cranes and Hoists.

Hand Power Cranes, Trolleys, Eto.

Chisholm & Moore Mfg. Co.

CLEVELAND, OHIO.

Compasses Adjusted

For deviation, and deviation tables supplied. Great facilities for doing the work by day or night.

John Maurice.

Office, 24-26 Market St., CHICAGO.
Residence, 1155 South Sacramento Avenue.

Use the Vanduzen Steam Jet... **PUMP**

THE BEST STEAM JET PUMP IN THE WORLD.

It pumps the most water using the least steam.

Its cost is a little more than the common syphon, but will use only one-third the quantity of steam; and it takes coal (? of $) to make steam.

The **only** reliable Jet Pump for fires on steam vessels.

A No. 7 Pump, costing $25.00, will force water through 50 feet of hose and throw a ¾-inch solid stream of water 75 feet from end of nozzle without fail as long as there is water at end of suction pipe. It will not *freeze*. Has no *valves*.

Every pump guaranteed. Ask your ship chandler for them, or write to us for illustrated catalogue.

THE E. W. VANDUZEN CO., CINCINNATI, O.

WM. WILFORD'S

Matchless Waterproof Cloth and Societe Anonyme De Veluwe, (Japan Paint).

EDWARD A. BUNKER,
Sole Agent,
20 Broad Street, New York City.

The Cuddy-Mullen Coal Co.

Miners and Shippers of STEAM COAL

FUELING DEPARTMENT FACILITIES.

CLEVELAND HARBOR.—Car Dumper; Eight Pockets, 1000 Tons Capacity; Lighter Steam Derricks.

DETROIT RIVER BRANCH.—Amherstburg: Four Pockets; Three Steam Derricks

SANDWICH—Fourteen Pockets and Two Steam Derricks.

"SOO" RIVER BRANCH.—Two Docks, (Formerly known as the Anthony and Watson Docks,) Equipped with Pockets and Steam Derricks.

GOOD COAL. COURTEOUS ATTENTION QUICK DISPATCH.

General Offices, Perry-Payne Bldg., Cleveland, O.

Youghiogheny River Coal Co.

MINER AND SHIPPER OF

OCEAN MINE YOUGHIOGHENY GAS AND STEAM COAL.

General Office: Erie, Pa. Long Distance 'Phone 409.

Shipping Docks: Ashtabula, O. Long Distance 'Phone 76.

VESSELS FUELED AT ALL HOURS

WITH OCEAN COAL ONLY, BY STEAM LIGHTER OR CAR DUMP.

ELECTRIC LIGHT.

THE W. L. SCOTT COMPANY,

ERIE, PA.

WHOLESALE DEALER IN

Shamokin-Wilkes Barre ANTHRACITE.
Youghiogheny, Mansfield, PITTSBURG.

Vessel Fueling a Specialty by steam lighter or car dump, at all hours. Electric light.

...Coals

MAIN OFFICE: SCOTT BLOCK. LONG DISTANCE 'PHONE 440.

FUELING OFFICE: CANAL DOCK. LONG DISTANCE 'PHONE 320.

Steamboat Fuel at Chicago.

THE Y&L

YOUGHIOGHENY and LEHIGH COAL CO.

J. T. CONNERY, Manager. ARCHIE J. HITCHCOCK, Dock Supt.

MAIN OFFICE: 1238-1242 Chicago Stock Exchange Building.

Long Distance Telephone, Main 5049. 110 LA SALLE STREET.

FUEL DOCKS: No. 1, Michigan Slip and Basin. 'Phone 3046, Main.
No. 2, N. Halstead St. Bridge. 'Phone 773, North.

FUEL LIGHTER: Equipped with 125 2-ton Buckets for Fueling anywhere in Harbor

Steamboat Fuel at Cleveland.

THE P&C

THE PITTSBURGH & CHICAGO GAS COAL CO.

J. A. DONALDSON, Manager. N. J. BOYLAN, Fuel Manager.

OFFICE: 420-421 PERRY-PAYNE BUILDING.

TELEPHONE, MAIN 1888.

FUEL DOCKS: No. 1, River Bed, through Valley R. R. Bridge. } Telephone,
No. 2, Main River, Foot of West River Street. } West 190.

FUEL LIGHTER: 300 Tons Capacity; Fuel Anywhere in the Harbor.

WE PRODUCE OUR YOUGHIOGHENY COAL, AND GUARANTEE QUALITY.

THE CHASE MACHINE COMPANY,

ENGINEERS AND MACHINISTS.

MANUFACTURERS, UNDER THE CHASE PATENTS, OF

Fog Whistle Machines, Hoisting Engines, Steering Engines Automatic Towing Engines,
Power and Drop Hammers, and other Machinery. Engineers' Supplies and General Jobbing.

111 ELM STREET. TELEPHONE, MAIN 994. CLEVELAND, O.

John E. Thropp & Sons' Co.

BUILDERS OF

Compound and Triple Expansion

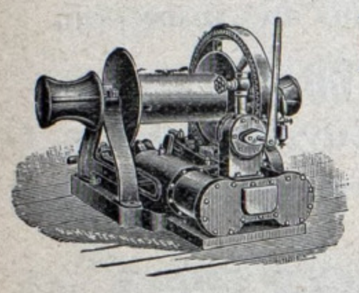
ENGINES,

Boilers, Surface Condensers, Propeller Wheels, Etc.

Contracts taken for yachts and tugs complete. Send for photographs of Engines and descriptive pamphlet.

Works on Delaware & Raritan Canal Basin.

TRENTON, N. J.



Dock and Deck Hoists

ALL KINDS OF

Machinery and Friction Hoists.

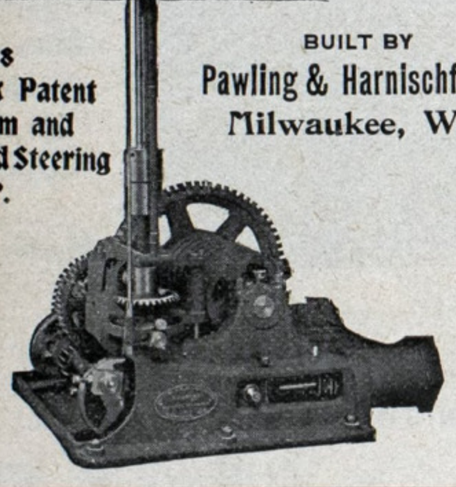
Send for Prices and Circulars.

JACKSON & CHURCH, Saginaw, Mich.

Simplest, Strongest and most Reliable. Changed from Steam to Hand or back by one lever in less than one Second.

No. 8 Beck Patent Steam and Hand Steering Gear.

BUILT BY Pawling & Harnischfeger, Milwaukee, Wis.



SEARCH LIGHTS.

RUSHMORE PROJECTORS

are in almost exclusive use in all classes of service, and are specified for finest Steamers and Yachts.

RUSHMORE DYNAMO WORKS,

Telephone 559. JERSEY CITY, N. J.

U. S. HYDROGRAPHIC OFFICE CHARTS,

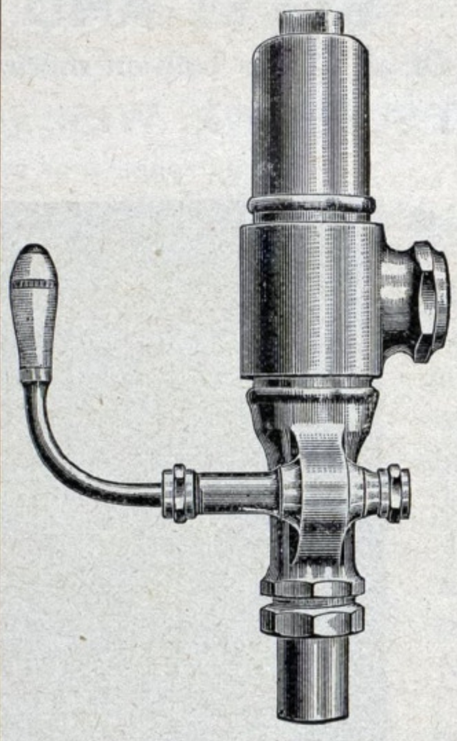
Books of Sailing Directions, Etc.,

ARE FOR SALE AT THE

....OFFICE OF....

THE MARINE RECORD,

Western Reserve Bldg., CLEVELAND.



THE

KENNEY FLUSHOMETER

FOR FLUSHING WATER CLOSETS

Takes the place of the noisy and dirty overhead flush tank, and is

THE BEST SYSTEM EVER INVENTED FOR USE ON STEAM VESSELS.

Owners and constructors of Steamships, Yachts and Steamboats have found it indispensable. Used by the U. S. War and Navy Departments. Transport Mohawk, U. S. Cruiser Detroit, U. S. Gunboat Amphitrite. Also Albany Day Line Steamers and others.

THE KENNEY FLUSHOMETER

Is Patented and Manufactured only by

THE KENNEY CO.,

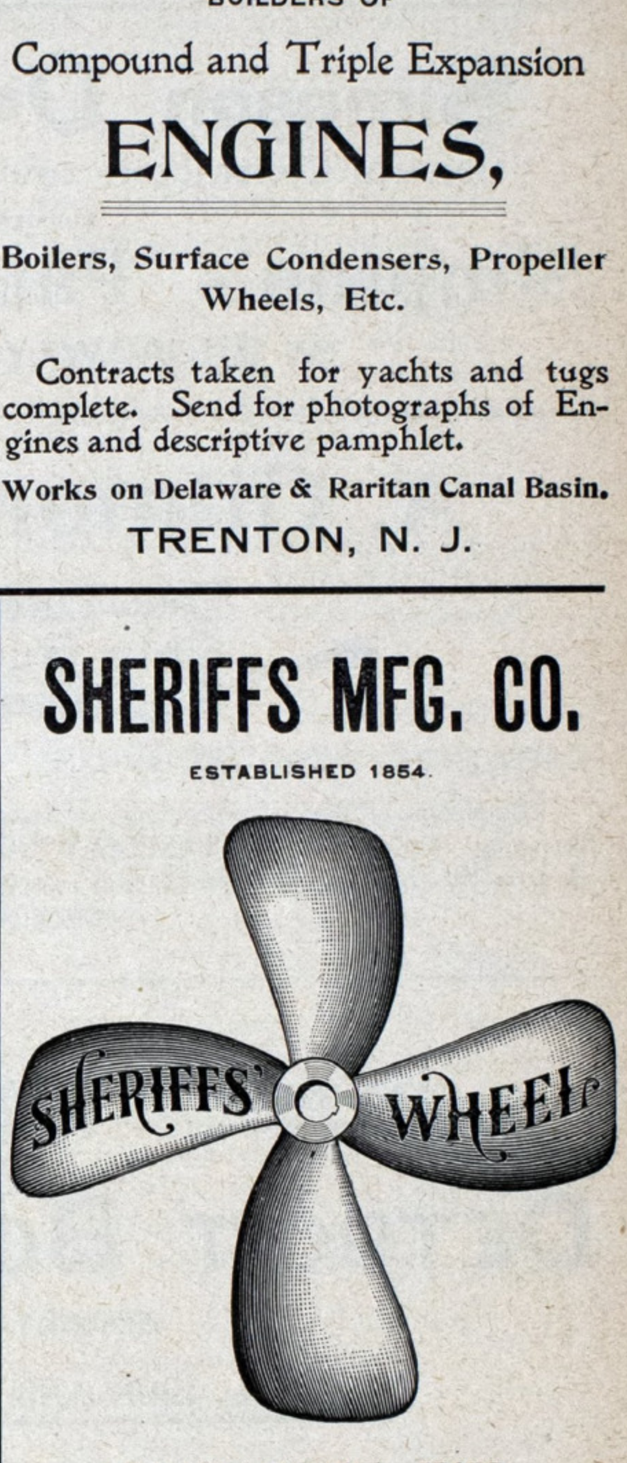
Who guarantee the successful operation of the system.

Send for illustrated pamphlet,

THE KENNEY COMPANY,
72-74 Trinity Place, NEW YORK.

SHERIFFS MFG. CO.

ESTABLISHED 1854.



MILWAUKEE, WIS.

DONNELLY CONTRACTING CO.

896 ELLICOTT SQUARE, BUFFALO, N. Y

CONTRACTORS AND CONSULTING ENGINEERS,
HARBOR AND CANAL WORKS, ETC.

NEVERSINK CORK JACKET AND LIFE BELT.

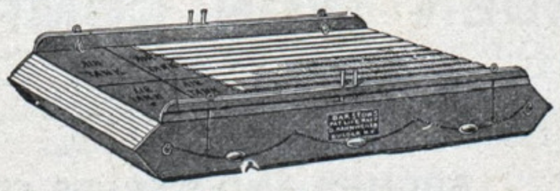
Warranted 24 lb. Buoyancy and full Weight of Cork, as required by U. S. Inspectors. **Consolidated Cork Life Preservers.** Superior to all others. **Rings Buoys and Fenders.** SAFEST CHEAPEST.

Approved and adopted by U. S. Board of Supervising Inspectors.

Also adopted by the principal Ocean, Lake and River Steamer Lines as the only Reliable Life Preserver. Vessels and trade supplied. Send for Catalogue.

Awardad four medals by World's Columbian Exposition.

METALLIC and WOODEN LIFE BOATS.



Metallic Life Rafts, Marine Drags.

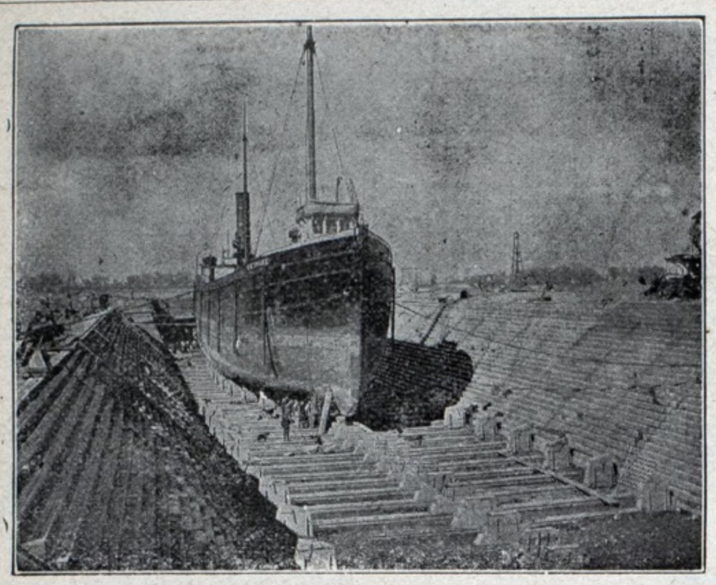
Manufacturer of Woolsey's Patent Life Buoy, which is the lightest, cheapest and most compact Life Raft known. Send for illustrated catalogue. Get our prices before buying elsewhere.

D. KAHNWEILER'S SONS, 437 Pearl St., New York City.

For Stationary, Portable, Traction Engines, Tugboats, &c.

Thoroughly Reliable—Perfectly Automatic.

JENKINS BROS., - Selling Agents,
NEW YORK, BOSTON, PHILA., CHICAGO.



Craig Ship Building Co.

TOLEDO, OHIO.

New Dry-Dock 450 feet long, 110 feet wide on top, 55 feet wide on bottom, 16 feet water on sill.

Repairs to Metal and Wooden Ships a Specialty.

Metal and Wooden Ship Builders.

Simpson Dry-Dock Co.

General Contractors and Consulting Engineers,

BUILDERS OF

Simpson's Patent Dry=Dock,

35 BROADWAY, NEW YORK.

SAFETY HOLLOW STAYBOLTS,

Manufactured from

BEST QUALITY STEEL OR CHARCOAL IRON,

Guaranteed to meet Government Specifications and Inspection.

FALLS HOLLOW STAYBOLT CO.,

Write for Samples and Prices. Cuyahoga Falls, O.

A. Gilmore's Sons,

Dry-Docking, Ship Building and Repairing.

EAST SIDE, NEAR IRONVILLE, - - - TOLEDO, O.

Dimensions of Dock, 236 feet long, 55 feet wide at top and 37 feet wide at gate. Nine feet water over sill. RATES OF DOCKING, Ten Cents per registered gross ton for vessels over 200 tons. Jig Mill and Planer in connection with Dock.

'PHONE NO. 157.

American Steel Barge Co.

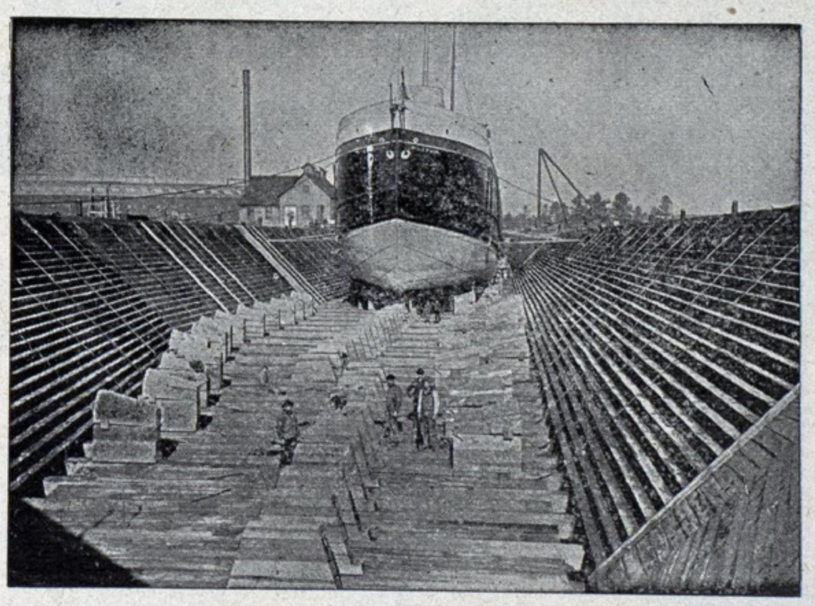
STEEL AND METAL SHIPS

Of all Classes built on shortest possible notice at our yards at

WEST SUPERIOR, WIS., and also at EVERETT, WASH.

PHOTOGRAPH OF 300-FOOT BOAT IN DOCK.

Plates and Material always on hand to repair all kinds of Metal Ships in Shortest Time.



Best Quality of Oak in Stock for Repairing Wooden Vessels of all Classes.

SIZE OF DOCK

Length, Extreme	537 feet.	Entrance, Top	55 feet 9 in.
Breadth, Top	90 " 4 in.	Entrance, Bottom	50 "
Breadth, Bottom	52 "	Depth over Sills	18 "

LARGEST DRY-DOCK ON THE LAKES.

Prices for Repairs and Docking same as at Lower Lake Ports.

SUPERIOR, WIS.

A Number of Propeller Wheels in Stock at Dry-Dock.

LIFE BOATS. YAWLS. LIFE RAFTS.

DETROIT BOAT WORKS

DETROIT, MICH.

STEEL, IRON AND WOODEN TUGS.

STEAM AND SAIL YACHTS.

ALL KINDS OF PLEASURE BOATS, FISHING AND HUNTING BOATS, SHELLS, BARGES, GIGS AND CANOES.

IRA B. BASSETT GEORGE PRESLEY, JR. A. R. TRAIN.

BASSETT, PRESLEY & TRAIN,

IRON AND STEEL WAREHOUSE.

Ship Plates; Ship Spikes, Angles, Beams; Channel and Tee Iron; Boiler Tubes; Boiler, Tank and Cooper Rivets; Steel Boiler Plates; Bar, Bridge and Car Iron; Hoops, Bands and Sheet Iron.

BURDEN IRON COMPANY BOILER RIVETS.

THE STANDARD AND ONLY RIVET USED BY ALL FIRST-CLASS BOILER MAKERS IN THE UNITED STATES.

Acme Shafting—We own and control the sale of this celebrated brand and carry a full stock of all sizes and lengths. Boiler, Bridge and Tank Plates, Nails, Boat and Railroad Spikes, Smoke Stack Rivets, Boiler Patch Bolts, Open Hearth Steel.

ARCHES AND STRAPS FOR VESSELS A SPECIALTY.

GENERAL OFFICES: 23 Merwin Street.

Telephones { Main 417. Main 423.

WAREHOUSE: 17 to 31 Merwin Street.

CLEVELAND - OHIO.

Patrons, Friends and Subscribers will confer a favor by mentioning the MARINE RECORD where they are led to make purchases through our advertising columns.